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AN ESSAY

ON THE

PRINCIPLE OF POPULATION;

OR, A

VIEW OF ITS PAST AND PRESENT EFFECTS

ON

HUMAN HAPPINESS;

WITH

AN INQUIRY INTO OUR PROSPECTS RESPECTING THE FUTURE REMOVAL OR MITIGATION OF THE EVILS WHICH IT OCCASIONS.

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IN TWO VOLUMES.

VOL. I.

THE FOURTH EDITION.

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PREFACE

TO THE SECOND EDITION.

THE Eſſay on the Principle of Population, which I publiſhed in 1798, was ſuggeſted, as is expreſſed in the preface, by a paper in Mr. Godwin's Inquirer. It was written on the impulſe of the occaſion, and from the few materials which were within my reach in a country ſituation. The only authors from whoſe writings I had deduced the principle, which formed the main argument of the Eſſay, were Hume, Wallace, Dr. Adam Smith, and Dr. Price; and my object was to apply it, to try the truth of thoſe ſpeculations on the perfectibility of man and ſociety, which at that time excited a conſiderable portion of the public attention.

In the courſe of the diſcuſſion I was naturally led into ſome examination of the effects of this principle on the exiſting ſtate of ſociety. It appeared to account for much of that poverty and miſery obſervable among the lower claſſes of people in every nation, and for thoſe reiterated failures in the efforts of the higher claſſes to relieve them. The more I conſidered the ſubject

To thoſe who either underſtood the ſubject before, or ſaw it diſtinctly on the peruſal of the firſt edition, I am fearful that I ſhall appear to have treated ſome parts of it too much in detail, and to have been guilty of unneceſſary repetitions. Theſe faults have ariſen partly from want of ſkill, and partly from intention. In drawing ſimilar inferences from the ſtate of ſociety in a number of different countries, I found it very difficult to avoid ſome repetitions; and in thoſe parts of the inquiry which led to concluſions different from our uſual habits of thinking, it appeared to me, that, with the ſlighteſt hope of producing conviction, it was neceſſary to preſent them to the reader's mind at different times, and on different occaſions. I was willing to ſacrifice all pretenſions to merit of compoſition, to the chance of making an impreſſion on a larger claſs of readers.

The main principle advanced is ſo incontrovertible, that, if I had confined myſelf merely to general views, I could have intrenched myſelf in an impregnable fortreſs; and the work, in this form, would probably have had a much more maſterly air. But ſuch general views, though they may advance the cauſe of abſtract truth, rarely tend to promote any practical good;

good; and I thought that I ſhould not do juſtice to the ſubject, and bring it fairly under diſcuſſion, if I refuſed to conſider any of the conſequences which appeared neceſſarily to flow from it, whatever theſe conſequences might be. By purſuing this plan, however, I am aware that I have opened a door to many objections; and, probably, to much ſeverity of criticiſm: but I conſole myſelf with the reflection, that even the errors into which I may have fallen, by affording a handle to argument, and an additional excitement to examination, may be ſubſervient to the important end, of bringing a ſubject ſo nearly connected with the happineſs of ſociety into more general notice.

Throughout the whole of the preſent work, I have ſo far differed in principle from the former, as to ſuppoſe another check to population poſſible, which does not ſtrictly come under the head either of vice or miſery; and, in the latter part, I have endeavoured to ſoften ſome of the harſheſt concluſions of the firſt Eſſay. In doing this, I hope that I have not violated the principles of juſt reaſoning; nor expreſſed any opinion, reſpecting the probable improvement of ſociety, in which I am not borne out by the experience of the paſt. To thoſe who

ſtill

ſtill think that any check to population whatever, would be worſe than the evils which it would relieve, the concluſions of the former Eſſay will remain in full force; and if we adopt this opinion, we ſhall be compelled to acknowledge, that the poverty and miſery which prevail among the lower claſſes of ſociety are abſolutely irremediable.

I have taken as much pains as I could to avoid any errors in the facts and calculations which have been produced in the courſe of the work. Should any of them nevertheleſs turn out to be falſe, the reader will ſee, that they will not materially affect the general ſcope of the reaſoning.

From the crowd of materials which preſented themſelves, in illuſtration of the firſt branch of the ſubject, I dare not flatter myſelf that I have ſelected the beſt, or arranged them in the moſt perſpicuous method. To thoſe who take an intereſt in moral and political queſtions, I hope that the novelty and importance of the ſubject will compenſate the imperfections of its execution.

London, June 8, 1803.

ADVER.

ADVERTISEMENT

TO THE

THIRD EDITION.

THE principal alterations in the preſent edition are the following:

The chapters which were the fourth and ſixth of the ſecond book are nearly rewritten, on account of an error into which the author had fallen in an attempt to eſtimate the fruitfulneſs of marriages and the number of the born living to be married, from the data in regiſters; and as the chapters, in their preſent ſtate, are not ſuggeſted by thoſe which immediately preceded them in the ſame manner as they were before, they are transferred to the latter part of the book, and now form the ninth and tenth chapters.

In the chapter of the ſame book, which treats of the Checks to Population in England, a remark has been added to ſhow the incorrectneſs of conſidering the proportion of births as nearly uniform throughout the laſt century, and conſequently of founding an eſtimate of the population at different periods on ſuch grounds.

In the fifth chapter of the third book an obſervation has been inſerted on the policy as well as

duty

duty of aſſiſting the poor through temporary ſeaſons of diſtreſs; and in the ſeventh, eighth, ninth, and tenth chapters of the ſame book, ſome paſſages have been omitted and others added, particularly in the tenth, which treats of bounties on the exportation of corn, on account of the preſent importance of the ſubject, and the diſcuſſion which it has lately received.

In the ſixth chapter of the fourth book, one paſſage has been omitted, and a paſſage has been added on the effect of good government in diminiſhing poverty.

In the ſeventh chapter of the ſame book a paſſage has been omitted; and in the eighth chapter a paſſage of ſome length, relating to a compariſon of the married and unmarried, has been omitted, and an obſervation added on the propriety of not underrating the deſirableneſs of marriage, while we are inculcating the duties of moral reſtraint.

Theſe are the moſt prominent alterations. The reſt conſiſt merely of a few verbal corrections, and here and there a ſhort paſſage or explanatory note, to prevent miſconceptions. Theſe minor corrections occur principally in the two firſt chapters.

The reader will ſee that the alterations here mentioned do not affect the principles of the work, and therefore do not eſſentially leſſen the value of the quarto edition.

In an appendix, an anſwer is given to the principal objections which have been urged againſt the Eſſay;

Eſſay; and for the accommodation of the purchaſers of the former edition it is printed in quarto, and may be had ſeparately. Thoſe who have no leiſure or inclination to read the entire work, will find in the appendix ſuch a notice of its moſt prominent arguments, as will give them a good general idea of the aim and bent of the whole.

CONTENTS

OF THE

FIRST VOLUME.

BOOK I.

OF THE CHECKS TO POPULATION IN THE LESS CIVILIZED PARTS OF THE WORLD AND IN PAST TIMES.

		Page
CHAP. I.	Statement of the Subject. Ratios of the Increaſe of Population and Food -	1
II.	Of the general Checks to Population, and the Mode of their Operation -	15
III.	Of the Checks to Population in the loweſt Stage of Human Society -	30
IV.	Of the Checks to Population among the American Indians - -	42
V.	Of the Checks to Population in the Iſlands of the South Sea - -	79
VI.	Of the Checks to Population among the ancient Inhabitants of the North of Europe - - -	110
VII.	Of the Checks to Population among modern Paſtoral Nations -	142
VIII.	Of the Checks to Population in different parts of Africa - -	170
IX.	Of the Checks to Population in Siberia, Northern and Southern -	195

CHAP.

Page

CHAP. X. Of the Checks to Population in the Turkiſh Dominions and Perſia - 211
XI. Of the Checks to Population in Indoſtan and Tibet - - 223
XII. Of the Checks to Population in China and Japan - - - 242
XIII. Of the Checks to Population among the Greeks - - - 272
XIV Of the Checks to Population among the Romans - - - 286

BOOK II.

OF THE CHECKS TO POPULATION IN THE DIFFERENT STATES OF MODERN EUROPE.

CHAP. I. Of the Checks to Population in Norway 305
II. Of the Checks to Population in Sweden 326
III. Of the Checks to Population in Ruſſia 350
IV. Of the Checks to Population in the middle parts of Europe - - 373
V. Of the Checks to Population in Switzerland - - - 392
VI. Of the Checks to Population in France 422
VII. Of the Checks to Population in England 449
VIII. Of the Checks to Population in Scotland and Ireland - - 482
IX. On the fruitfulneſs of Marriages - 506
X. Effects of Epidemics on Regiſters of Births, Deaths, and Marriages - 537
XI. General deductions from the preceding view of Society - - 555

ESSAY

ESSAY, &c.

BOOK I.

OF THE CHECKS TO POPULATION IN THE LESS CIVILIZED PARTS OF THE WORLD AND IN PAST TIMES.

CHAP. I.

Statement of the Subject. Ratios of the Increaſe of Population and Food.

In an inquiry concerning the improvement of ſociety, the mode of conducting the ſubject which naturally preſents itſelf, is

1. To inveſtigate the cauſes that have hitherto impeded the progreſs of mankind towards happineſs; and

2. To examine the probability of the total or partial removal of theſe cauſes in future.

To enter fully into this queſtion, and to enumerate all the cauſes that have hitherto influenced

enced human improvement, would be much beyond the power of an individual. The principal object of the preſent eſſay is to examine the effects of one great cauſe intimately united with the very nature of man; which, though it has been conſtantly and powerfully operating ſince the commencement of ſociety, has been little noticed by the writers who have treated this ſubject. The facts which eſtabliſh the exiſtence of this cauſe have, indeed, been repeatedly ſtated and acknowledged; but its natural and neceſſary effects have been almoſt totally overlooked; though probably among theſe effects may be reckoned a very conſiderable portion of that vice and miſery, and of that unequal diſtribution of the bounties of nature, which it has been the unceaſing object of the enlightened philanthropiſt in all ages to correct.

The cauſe to which I allude, is the conſtant tendency in all animated life to increaſe beyond the nouriſhment prepared for it.

It is obſerved by Dr. Franklin, that there is no bound to the prolific nature of plants or animals, but what is made by their crowding and interfering with each others means of ſubſiſtence. Were the face of the earth, he ſays, vacant of other plants, it might be gradually

ſowed and overſpread with one kind only, as for inſtance with fennel: and were it empty of other inhabitants, it might in a few ages be repleniſhed from one nation only, as for inſtance with Engliſhmen[a].

This is incontrovertibly true. Through the animal and vegetable kingdoms Nature has ſcattered the ſeeds of life abroad with the moſt profuſe and liberal hand; but has been comparatively ſparing in the room and the nouriſhment neceſſary to rear them. The germs of exiſtence contained in this earth, if they could freely develope themſelves, would fill millions of worlds in the courſe of a few thouſand years. Neceſſity, that imperious all-pervading law of nature, reſtrains them within the preſcribed bounds. The race of plants and the race of animals ſhrink under this great reſtrictive law; and man cannot by any efforts of reaſon eſcape from it.

In plants and irrational animals, the view of the ſubject is ſimple. They are all impelled by a powerful inſtinct to the increaſe of their ſpecies; and this inſtinct is interrupted by no doubts about providing for their offſpring. Wherever there-

[a] Franklin's Miſcell. p. 9.

fore there is liberty, the power of increaſe is exerted; and the ſuperabundant effects are repreſſed afterwards by want of room and nouriſhment.

The effects of this check on man are more complicated. Impelled to the increaſe of his ſpecies by an equally powerful inſtinct, reaſon interrupts his career, and aſks him whether he may not bring beings into the world, for whom he cannot provide the means of ſupport. If he attend to this natural ſuggeſtion, the reſtriction too frequently produces vice. If he hear it not, the human race will be conſtantly endeavouring to increaſe beyond the means of ſubſiſtence. But as by that law of our nature which makes food neceſſary to the life of man, population can never actually increaſe beyond the loweſt nouriſhment capable of ſupporting it, a ſtrong check on population, from the difficulty of acquiring food, muſt be conſtantly in operation. This difficulty muſt fall ſomewhere, and muſt neceſſarily be ſeverely felt in ſome or other of the various forms of miſery, or the fear of miſery, by a large portion of mankind.

That population has this conſtant tendency to increaſe beyond the means of ſubſiſtence, and that it is kept to its neceſſary level by theſe cauſes,

cauſes, will ſufficiently appear from a review of the different ſtates of ſociety in which man has exiſted. But before we proceed to this review, the ſubject will perhaps be ſeen in a clearer light, if we endeavour to aſcertain, what would be the natural increaſe of population, if left to exert itſelf with perfect freedom; and what might be expected to be the rate of increaſe in the productions of the earth, under the moſt favourable circumſtances of human induſtry.

It will be allowed, that no country has hitherto been known, where the manners were ſo pure and ſimple, and the means of ſubſiſtence ſo abundant, that no check whatever has exiſted to early marriges from the difficulty of providing for a family, and that no waſte of the human ſpecies has been occaſioned by vicious cuſtoms, by towns, by unhealthy occupations, or too ſevere labour. Conſequently in no ſtate that we have yet known, has the power of population been left to exert itſelf with perfect freedom.

Whether the law of marriage be inſtituted, or not, the dictate of nature and virtue ſeems to be an early attachment to one woman; and where there were no impediments of any kind

in the way of an union to which ſuch an attachment would lead, and no cauſes of depopulation afterwards, the increaſe of the human ſpecies would be evidently much greater than any increaſe which has been hitherto known.

In the northern ſtates of America, where the means of ſubſiſtence have been more ample, the manners of the people more pure, and the checks to early marriages fewer, than in any of the modern ſtates of Europe, the population has been found to double itſelf, for above a century and a half ſucceſſively, in leſs than in each period of twenty-five years[a]. Yet even during theſe periods, in ſome of the towns, the deaths exceeded the births[b], a circumſtance which clearly proves that in thoſe parts of the country which ſupplied this deficiency, the increaſe muſt have been much more rapid than the general average.

In the back ſettlements, where the ſole employment is agriculture, and vicious cuſtoms

[a] It appears from ſome recent calculations and eſtimates, that from the firſt ſettlement of America, to the year 1800, the periods of doubling have been but very little above twenty years. See a note on the increaſe of American population in Book ii. chap. xi.

[b] Price's Obſerv. on Reverſ. Pay. vol. i. p. 274. Edit. 4to.

and

and unwholeſome occupations are little known, the population has been found to double itſelf in fifteen years[a]. Even this extraordinary rate of increaſe is probably ſhort of the utmoſt power of population. Very ſevere labour is requiſite to clear a freſh country; ſuch ſituations are not in general conſidered as particularly healthy; and the inhabitants are probably occaſionally ſubject to the incurſions of the Indians, which may deſtroy ſome lives, or at any rate diminiſh the fruits of their induſtry.

According to a table of Euler, calculated on a mortality of 1 in 36, if the births be to the deaths in the proportion of 3 to 1, the period of doubling will be only 12$\frac{1}{2}$ years[b]. And this proportion is not only a poſſible ſuppoſition, but has actually occurred for ſhort periods in more countries than one.

Sir William Petty ſuppoſes a doubling poſſible in ſo ſhort a time as ten years[c].

But to be perfectly ſure that we are far within the truth, we will take the ſloweſt of theſe rates of increaſe, a rate, in which all concurring

[a] Id. p. 282. [b] See this table at the end of chap. iv. book ii.
[c] Polit. Arith. p. 14.

teſtimonies agree, and which has been repeatedly aſcertained to be from procreation only.

It may ſafely be pronounced, therefore, that population, when unchecked, goes on doubling itſelf every twenty-five years, or increaſes in a geometrical ratio.

The rate according to which the productions of the earth may be ſuppoſed to increaſe, it will not be ſo eaſy to determine. Of this, however, we may be perfectly certain, that the ratio of their increaſe muſt be totally of a different nature from the ratio of the increaſe of population. A thouſand millions are juſt as eaſily doubled every twenty-five years by the power of population as a thouſand. But the food to ſupport the increaſe from the greater number will by no means be obtained with the ſame facility. Man is neceſſarily confined in room. When acre has been added to acre till all the fertile land is occupied, the yearly increaſe of food muſt depend upon the melioration of the land already in poſſeſſion. This is a ſtream, which from the nature of all ſoils, inſtead of increaſing, muſt be gradually diminiſhing. But population, could it be ſupplied with food, would go on with unexhauſted vigour;

gour; and the increaſe of one period would furniſh the power of a greater increaſe the next, and this without any limit.

From the accounts we have of China and Japan, it may be fairly doubted, whether the beſt directed efforts of human induſtry could double the produce of theſe countries even once in any number of years. There are many parts of the globe, indeed, hitherto uncultivated, and almoſt unoccupied; but the right of exterminating, or driving into a corner where they muſt ſtarve, even the inhabitants of theſe thinly peopled regions, will be queſtioned in a moral view. The proceſs of improving their minds and directing their induſtry would neceſſarily be ſlow; and during this time, as population would regularly keep pace with the increaſing produce, it would rarely happen that a great degree of knowledge and induſtry would have to operate at once upon rich unappropriated ſoil. Even where this might take place, as it does ſometimes in new colonies, a geometrical ratio increaſes with ſuch extraordinary rapidity, that the advantage could not laſt long. If America continue increaſing, which ſhe certainly will do, though not with the ſame rapidity

pidity as formerly, the Indians will be driven further and further back into the country, till the whole race is ultimately exterminated.

Theſe obſervations are, in a degree, applicable to all the parts of the earth, where the ſoil is imperfectly cultivated. To exterminate the inhabitants of the greateſt part of Aſia and Africa, is a thought that could not be admitted for a moment. To civilize and direct the induſtry of the various tribes of Tartars and Negroes, would certainly be a work of conſiderable time, and of variable and uncertain ſucceſs.

Europe is by no means ſo fully peopled as it might be. In Europe there is the faireſt chance that human induſtry may receive its beſt direction. The ſcience of agriculture has been much ſtudied in England and Scotland; and there is ſtill a great portion of uncultivated land in theſe countries. Let us conſider, at what rate the produce of this iſland might be ſuppoſed to increaſe under circumſtances the moſt favourable to improvement.

If it be allowed, that by the beſt poſſible policy, and great encouragements to agriculture, the average produce of the iſland could be doubled in the firſt twenty-five years, it will be allowing

allowing probably a greater increaſe than could with reaſon be expected.

In the next twenty-five years, it is impoſſible to ſuppoſe that the produce could be quadrupled. It would be contrary to all our knowledge of the properties of land. The improvement of the barren parts would be a work of time and labour; and it muſt be evident to thoſe who have the ſlighteſt acquaintance with agricultural ſubjects, that in proportion as cultivation extended, the additions that could yearly be made to the former average produce muſt be gradually and regularly diminiſhing. That we may be the better able to compare the increaſe of population and food, let us make a ſuppoſition, which, without pretending to accuracy, is clearly more favourable to the power of production in the earth, than any experience we have had of its qualities will warrant.

Let us ſuppoſe that the yearly additions which might be made to the former average produce, inſtead of decreaſing, which they certainly would do, were to remain the ſame; and that the produce of this iſland might be increaſed every twenty-five years, by a quantity equal to what it at preſent produces. The moſt enthuſiaſtic

ſpeculator

ſpeculator cannot ſuppoſe a greater increaſe than this. In a few centuries it would make every acre of land in the iſland like a garden.

If this ſuppoſition be applied to the whole earth, and if it be allowed that the ſubſiſtence for man which the earth affords, might be increaſed every twenty-five years by a quantity equal to what it at preſent produces, this will be ſuppoſing a rate of increaſe much greater than we can imagine that any poſſible exertions of mankind could make it.

It may be fairly pronounced therefore, that, conſidering the preſent average ſtate of the earth, the means of ſubſiſtence, under circumſtances the moſt favourable to human induſtry, could not poſſibly be made to increaſe faſter than in an arithmetical ratio.

The neceſſary effects of theſe two different rates of increaſe, when brought together, will be very ſtriking. Let us call the population of this iſland eleven millions; and ſuppoſe the preſent produce equal to the eaſy ſupport of ſuch a number. In the firſt twenty-five years the population would be twenty-two millions, and the food being alſo doubled, the means of ſubſiſtence would be equal to this increaſe. In the

next

next twenty-five years, the population would be forty-four millions, and the means of ſubſiſtence only equal to the ſupport of thirty-three millions. In the next period the population would be eighty-eight millions, and the means of ſubſiſtence juſt equal to the ſupport of half of that number. And at the concluſion of the firſt century, the population would be a hundred and ſeventy-ſix millions, and the means of ſubſiſtence only equal to the ſupport of fifty-five millions, leaving a population of a hundred and twenty-one millions totally unprovided for.

Taking the whole earth inſtead of this iſland, emigration would of courſe be excluded; and ſuppoſing the preſent population equal to a thouſand millions, the human ſpecies would increaſe as the numbers 1, 2, 4, 8, 16, 32, 64, 128, 256, and ſubſiſtence as 1, 2, 3, 4, 5, 6, 7, 8, 9. In two centuries the population would be to the means of ſubſiſtence as 256 to 9; in three centuries as 4096 to 13, and in two thouſand years the difference would be almoſt incalculable.

In this ſuppoſition no limits whatever are placed to the produce of the earth. It may increaſe for ever, and be greater than any aſſignable quantity; yet ſtill the power of population being

being in every period ſo much ſuperior, the increaſe of the human ſpecies can only be kept down to the level of the means of ſubſiſtence by the conſtant operation of the ſtrong law of neceſſity acting as a check upon the greater power.

CHAP.

CHAP. II.

Of the general Checks to Population, and the Mode of their Operation.

THE ultimate check to population appears then to be a want of food ariſing neceſſarily from the different ratios according to which population and food increaſe. But this ultimate check is never the immediate check, except in caſes of actual famine.

The immediate check may be ſtated to conſiſt in all thoſe cuſtoms, and all thoſe diſeaſes which ſeem to be generated by a ſcarcity of the means of ſubſiſtence; and all thoſe cauſes, independent of this ſcarcity, whether of a moral or phyſical nature, which tend prematurely to weaken and deſtroy the human frame.

Theſe checks to population, which are conſtantly operating with more or leſs force in every ſociety, and keep down the number to the level of the means of ſubſiſtence, may be claſſed under two general heads, the preventive, and the poſitive checks.

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The preventive check, as far as it is voluntary, is peculiar to man, and ariſes from that diſtinctive ſuperiority in his reaſoning faculties, which enables him to calculate diſtant conſequences. The checks to the indefinite increaſe of plants and irrational animals are all either poſitive, or, if preventive, involuntary. But man cannot look around him, and ſee the diſtreſs which frequently preſſes upon thoſe who have large families; he cannot contemplate his preſent poſſeſſions or earnings, which he now nearly conſumes himſelf, and calculate the amount of each ſhare, when with very little addition they muſt be divided, perhaps, among ſeven or eight, without feeling a doubt, whether if he follow the bent of his inclinations, he may be able to ſupport the offspring which he will probably bring into the world. In a ſtate of equality, if ſuch can exiſt, this would be the ſimple queſtion. In the preſent ſtate of ſociety other conſiderations occur. Will he not lower his rank in life, and be obliged to give up in great meaſure his former habits? Does any mode of employment preſent itſelf by which he may reaſonably hope to maintain a family? Will he not at any rate ſubject himſelf to greater difficulties, and more ſevere labour than in his ſingle ſtate?

ſtate? Will he not be unable to tranſmit to his children the ſame advantages of education and improvement that he had himſelf poſſeſſed? Does he even feel ſecure that, ſhould he have a large family, his utmoſt exertions can ſave them from rags and ſqualid poverty, and their conſequent degradation in the community? And may he not be reduced to the grating neceſſity of forfeiting his independence, and of being obliged to the ſparing hand of charity for ſupport?

Theſe conſiderations are calculated to prevent, and certainly do prevent, a great number of perſons in all civilized nations from purſuing the dictate of nature in an early attachment to one woman.

If this reſtraint do not produce vice, it is undoubtedly the leaſt evil that can ariſe from the principle of population. Conſidered as a reſtraint on a ſtrong natural inclination, it muſt be allowed to produce a certain degree of temporary unhappineſs; but evidently ſlight, compared with the evils which reſult from any of the other checks to population; and merely of the ſame nature as many other ſacrifices of temporary to permanent gratification, which it

is the buſineſs of a moral agent continually to make.

When this reſtraint produces vice, the evils which follow are but too conſpicuous. A promiſcuous intercourſe to ſuch a degree as to prevent the birth of children ſeems to lower in the moſt marked manner the dignity of human nature. It cannot be without its effect on men, and nothing can be more obvious than its tendency to degrade the female character, and to deſtroy all its moſt amiable and diſtinguiſhing characteriſtics. Add to which, that among thoſe unfortunate females with which all great towns abound, more real diſtreſs and aggravated miſery are perhaps to be found, than in any other department of human life.

When a general corruption of morals with regard to the ſex pervades all the claſſes of ſociety, its effects muſt neceſſarily be, to poiſon the ſprings of domeſtic happineſs, to weaken conjugal and parental affection, and to leſſen the united exertions and ardour of parents in the care and education of their children; effects which cannot take place without a decided diminution of the general happineſs and virtue of the ſociety; particularly as the neceſſity of art

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in the accompliſhment and conduct of intrigues, and in the concealment of their conſequences, neceſſarily leads to many other vices.

The poſitive checks to population are extremely various, and include every cauſe, whether ariſing from vice or miſery, which in any degree contributes to ſhorten the natural duration of human life. Under this head therefore may be enumerated all unwholeſome occupations, ſevere labour and expoſure to the ſeaſons, extreme poverty, bad nurſing of children, great towns, exceſſes of all kinds, the whole train of common diſeaſes and epidemics, wars, plague, and famine.

On examining theſe obſtacles to the increaſe of population which I have claſſed under the heads of preventive and poſitive checks, it will appear that they are all reſolvable into moral reſtraint, vice, and miſery.

Of the preventive checks, the reſtraint from marriage which is not followed by irregular gratifications may properly be termed moral reſtraint[a].

Promiſcuous

[a] It will be obſerved, that I here uſe the term *moral* in its moſt confined ſenſe. By moral reſtraint I would be underſtood to mean a reſtraint from marriage, from prudential motives,

Promiſcuous intercourſe, unnatural paſſions, violations of the marriage bed, and improper arts to conceal the conſequences of irregular connexions, are preventive checks that clearly come under the head of vice.

Of the poſitive checks, thoſe which appear to ariſe unavoidably from the laws of nature may be called excluſively miſery; and thoſe which we obviouſly bring upon ourſelves, ſuch as wars, exceſſes, and many others which it would be in our power to avoid, are of a mixed nature. They are brought upon us by vice, and their conſequences are miſery[a].

The

tives, with a conduct ſtrictly moral during the period of this reſtraint; and I have never intentionally deviated from this ſenſe. When I have wiſhed to conſider the reſtraint from marriage unconnected with its conſequences, I have either called it prudential reſtraint, or a part of the preventive check, of which indeed it forms the principal branch.

In my review of the different ſtages of ſociety, I have been accuſed of not allowing ſufficient weight in the prevention of population to moral reſtraint; but when the confined ſenſe of the term, which I have here explained, is adverted to, I am fearful that I ſhall not be found to have erred much in this reſpect. I ſhould be very glad to believe myſelf miſtaken.

[a] As the general conſequence of vice is miſery, and as this conſequence is the preciſe reaſon why an action is termed vicious, it may appear that the term miſery alone would be here ſufficient,

The ſum of all theſe preventive and poſitive checks taken together forms the immediate check to population; and it is evident that in every country where the whole of the procreative power cannot be called into action, the preventive and the poſitive checks muſt vary inverſely as each other; that is, in countries either naturally unhealthy, or ſubject to a great mortality, from whatever cauſe it may ariſe, the preventive check will prevail very little. In thoſe countries, on the contrary, which are naturally

ſufficient, and that it is ſuperfluous to uſe both. But the rejection of the term vice would introduce a conſiderable confuſion into our language and ideas. We want it particularly to diſtinguiſh that claſs of actions, the general tendency of which is to produce miſery, but which, in their immediate or individual effects, may produce perhaps exactly the contrary. The gratification of all our paſſions in its immediate effect is happineſs, not miſery; and in individual inſtances even the remote conſequences (at leaſt in this life) come under the ſame denomination. I have little doubt that there have been ſome irregular connexions with women, which have added to the happineſs of both parties, and have injured no one. Theſe individual actions therefore cannot come under the head of miſery. But they are ſtill evidently vicious, becauſe an action is ſo denominated, the general tendency of which is to produce miſery, whatever may be its individual effect; and no perſon can doubt the general tendency of an illicit intercourſe between ſexes, to injure the happineſs of ſociety.

rally healthy, and where the preventive check is found to prevail with conſiderable force, the poſitive check will prevail very little, or the mortality be very ſmall.

In every country ſome of theſe checks are, with more or leſs force, in conſtant operation; yet notwithſtanding their general prevalence, there are few ſtates in which there is not a conſtant effort in the population to increaſe beyond the means of ſubſiſtence. This conſtant effort as conſtantly tends to ſubject the lower claſſes of ſociety to diſtreſs, and to prevent any great permanent melioration of their condition.

Theſe effects, in the preſent ſtate of ſociety, ſeem to be produced in the following manner. We will ſuppoſe the means of ſubſiſtence in any country juſt equal to the eaſy ſupport of its inhabitants. The conſtant effort towards population, which is found to act even in the moſt vicious ſocieties, increaſes the number of people before the means of ſubſiſtence are increaſed. The food therefore which before ſupported eleven millions, muſt now be divided among eleven millions and a half. The poor conſequently muſt live much worſe, and many of them be reduced to ſevere diſtreſs. The number

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of labourers alſo being above the proportion of work in the market, the price of labour muſt tend to fall, while the price of proviſions would at the ſame time tend to riſe. The labourer therefore muſt do more work, to earn the ſame as he did before. During this ſeaſon of diſtreſs the diſcouragements to marriage, and the difficulty of rearing a family are ſo great, that population is nearly at a ſtand. In the mean time, the cheapneſs of labour, the plenty of labourers, and the neceſſity of an increaſed induſtry among them, encourage cultivators to employ more labour upon their land, to turn up freſh ſoil, and to manure and improve more completely what is already in tillage; till ultimately the means of ſubſiſtence may become in the ſame proportion to the population, as at the period from which we ſet out. The ſituation of the labourer being then again tolerably comfortable, the reſtraints to population are in ſome degree looſened; and, after a ſhort period, the ſame retrograde and progreſſive movements, with reſpect to happineſs, are repeated.

This ſort of oſcillation will not probably be obvious to common view; and it may be difficult even for the moſt attentive obſerver to calculate its periods. Yet that in the generality

of old ſtates, ſome ſuch vibration does exiſt, though in a much leſs marked, and in a much more irregular manner, than I have deſcribed it, no reflecting man who conſiders the ſubject deeply can well doubt.

One principal reaſon why this oſcillation has been leſs remarked, and leſs decidedly confirmed by experience than might naturally be expected, is, that the hiſtories of mankind which we poſſeſs are, in general, hiſtories only of the higher claſſes. We have not many accounts, that can be depended upon, of the manners and cuſtoms of that part of mankind, where theſe retrograde and progreſſive movements chiefly take place. A ſatisfactory hiſtory of this kind, of one people and of one period, would require the conſtant and minute attention of many obſerving minds in local and general remarks on the ſtate of the lower claſſes of ſociety, and the cauſes that influenced it; and to draw accurate inferences upon this ſubject, a ſucceſſion of ſuch hiſtorians for ſome centuries would be neceſſary. This branch of ſtatiſtical knowledge has of late years been attended to in ſome countries[a], and we may

[a] The judicious queſtions which Sir John Sinclair circulated in Scotland, and the very valuable accounts which he has collected

may promiſe ourſelves a clearer inſight into the internal ſtructure of human ſociety from the progreſs of theſe inquiries. But the ſcience may be ſaid yet to be in its infancy, and many of the objects, on which it would be deſirable to have information, have been either omitted or not ſtated with ſufficient accuracy. Among theſe perhaps may be reckoned, the proportion of the number of adults to the number of marriages; the extent to which vicious cuſtoms have prevailed in conſequence of the reſtraints upon

lected in that part of the iſland, do him the higheſt honour; and theſe accounts will ever remain an extraordinary monument of the learning, good ſenſe, and general information of the clergy of Scotland. It is to be regretted that the adjoining pariſhes are not put together in the work, which would have aſſiſted the memory both in attaining and recollecting the ſtate of particular diſtricts. The repetitions and contradictory opinions which occur are not in my opinion ſo objectionable, as, to the reſult of ſuch teſtimony, more faith may be given than we could poſſibly give to the teſtimony of any individval. Even were this reſult drawn for us by ſome maſter hand, though much valuable time would undoubtedly be ſaved, the information would not be ſo ſatisfactory. If with a few ſubordinate improvements, this work had contained accurate and complete regiſters for the laſt 150 years, it would have been ineſtimable, and would have exhibited a better picture of the internal ſtate of a country, than has yet been preſented to the world. But this laſt moſt eſſential improvement no diligence could have affected.

matrimony;

matrimony; the comparative mortality among the children of the moſt diſtreſſed part of the community, and of thoſe who live rather more at their eaſe; the variations in the real price of labour; the obſervable differences in the ſtate of the lower claſſes of ſociety with reſpect to eaſe and happineſs, at different times during a certain period; and very accurate regiſters of births, deaths, and marriages, which are of the utmoſt importance in this ſubject.

A faithful hiſtory, including ſuch particulars, would tend greatly to elucidate the manner in which the conſtant check upon population acts; and would probably prove the exiſtence of the retrograde and progreſſive movements that have been mentioned; though the times of their vibration muſt neceſſarily be rendered irregular from the operation of many interrupting cauſes; ſuch as, the introduction of or failure of certain manufactures, a greater or leſs prevalent ſpirit of agricultural enterpriſe; years of plenty, or years of ſcarcity; wars, fickly ſeaſons, poor laws, emigration, and other cauſes of a ſimilar nature.

A circumſtance which has perhaps more than any other contributed to conceal this oſcillation

from

from common view is, the difference between the nominal and real price of labour. It very rarely happens that the nominal price of labour univerſally falls; but we well know that it frequently remains the ſame, while the nominal price of proviſions has been gradually riſing. This is, in effect, a real fall in the price of labour; and, during this period, the condition of the lower claſſes of the community muſt be gradually growing worſe. But the farmers and capitaliſts are growing rich from the real cheapneſs of labour. Their increaſing capitals enable them to employ a greater number of men; and, as the population had probably ſuffered ſome check from the greater difficulty of ſupporting a family, the demand for labour, after a certain period, would be great in proportion to the ſupply, and its price would of courſe riſe, if left to find its natural level; and thus the wages of labour, and conſequently the condition of the lower claſſes of ſociety, might have progreſſive and retrograde movements, though the price of labour might never nominally fall.

In ſavage life, where there is no regular price of labour, it is little to be doubted that ſimilar oſcillations take place. When population has increaſed nearly to the utmoſt limits of the food,

food, all the preventive and the poſitive checks will naturally operate with increaſed force. Vicious habits with reſpect to the ſex will be more general, the expoſing of children more frequent, and both the probability and fatality of wars and epidemics will be conſiderably greater; and theſe cauſes will probably continue their operation till the population is ſunk below the level of the food; and then the return to comparative plenty will again produce an increaſe, and, after a certain period, its further progreſs will again be checked by the ſame cauſes.[a]

But without attempting to eſtabliſh theſe progreſſive and retrograde movements in different countries, which would evidently require more minute hiſtories than we poſſeſs, and which the progreſs of civilization naturally tends to counteract, the following propoſitions are intended to be proved:

1. Population is neceſſarily limited by the means of ſubſiſtence.

[a] Sir James Steuart very juſtly compares the generative faculty to a ſpring loaded with a variable weight, (Polit. Econ. vol. i. b. i. c. 4. p. 20.) which would of courſe produce exactly that kind of oſcillation which has been mentioned. In the firſt book of his political Economy, he has explained many parts of the ſubject of population very ably.

2. Population

2. Population invariably increaſes, where the means of ſubſiſtence increaſe, unleſs prevented by ſome very powerful and obvious checks[a].

3. Theſe checks, and the checks which repreſs the ſuperior power of population, and keep its effects on a level with the means of ſubſiſtence, are all reſolvable into moral reſtraint, vice, and miſery.

The firſt of theſe propoſitions ſcarcely needs illuſtration. The ſecond and third will be ſufficiently eſtabliſhed by a review of the immediate checks to population in the paſt and preſent ſtate of ſociety.

This review will be the ſubject of the following chapters.

[a] I have expreſſed myſelf in this cautious manner, becauſe I believe there are a very few inſtances, ſuch as the negroes in the Weſt Indies, and one or two others, where population does not keep up to the level of the means of ſubſiſtence. But theſe are extreme caſes; and generally ſpeaking it might be ſaid, that,

2. Population always increaſes where the means of ſubſiſtence increaſe.

3. The checks which repreſs the ſuperior power of population, and keep its effects on a level with the means of ſubſiſtence, are all reſolvable into moral reſtraint, vice, and miſery.

CHAP. III.

Of the Checks to Population in the loweſt Stage of Human Society.

THE wretched inhabitants of Tierra del Fuego have been placed by the general conſent of voyagers at the bottom of the ſcale of human beings[a]. Of their domeſtic habits and manners, however, we have few accounts. Their barren country, and the miſerable ſtate in which they live, have prevented any intercourſe with them that might give ſuch information; but we cannot be at a loſs to conceive the checks to population among a race of ſavages, whoſe very appearance indicates them to be half ſtarved, and who, ſhivering with cold, and covered with filth and vermin, live in one of the moſt inhoſpitable climates in the world, without having ſagacity enough to provide themſelves with ſuch conveniencies as might mitigate its ſeverities, and render life in ſome meaſure more comfortable[b].

[a] Cook's Firſt Voy. vol. ii. p. 59.
[b] Second Voy. vol. ii. p. 187.

Next

Next to theſe, and almoſt as low in genius and reſources, have been placed the natives of Van Diemen's land[a]; but ſome late accounts have repreſented the iſlands of Andaman in the eaſt as inhabited by a race of ſavages ſtill lower in wretchedneſs even than theſe. Every thing that voyagers have related of ſavage life is ſaid to fall ſhort of the barbariſm of this people. Their whole time is ſpent in ſearch of food; and as their woods yield them few or no ſupplies of animals, and but little vegetable diet, their principal occupation is that of climbing the rocks, or roving along the margin of the ſea, in ſearch of a precarious meal of fiſh, which, during the tempeſtuous ſeaſon, they often ſeek for in vain. Their ſtature ſeldom exceeds five feet; their bellies are protuberant, with high ſhoulders, large heads, and limbs diſproportionably ſlender. Their countenances exhibit the extreme of wretchedneſs, a horrid mixture of famine and ferocity; and their extenuated and diſeaſed figures plainly indicate the want of wholeſome nouriſhment. Some of theſe unhappy beings have been found on the ſhores in the laſt ſtage of famine[b].

[a] Vancouver's Voy. vol. ii. b. iii. c. i. p. 13.

[b] Symes' Embaſſy to Ava, ch. i. p. 129, and Aſiatic Reſearches, vol. iv. p. 401.

In

In the next ſcale of human beings we may place the inhabitants of New Holland, of a part of whom we have ſome accounts that may be depended upon, from a perſon who reſided a conſiderable time at Port Jackſon, and had frequent opportunities of being a witneſs to their habits and manners. The narrator of Captain Cook's firſt voyage having mentioned the very ſmall number of inhabitants that was ſeen on the eaſtern coaſt of New Holland, and the apparent inability of the country, from its deſolate ſtate, to ſupport many more, obſerves, "By "what means the inhabitants of this country "are reduced to ſuch a number as it can ſubſiſt, "is not perhaps very eaſy to gueſs; whether, "like the inhabitants of New Zealand, they are "deſtroyed by the hands of each other in con-"teſts for food, whether they are ſwept off by "accidental famine, or whether there is any "cauſe that prevents the increaſe of the ſpecies, "muſt be left for future adventurers to de-"termine[a]."

The account which Mr. Collins has given of theſe ſavages will, I hope, afford in ſome degree a ſatisfactory anſwer. They are deſcribed as, in

[a] Cook's Firſt Voy. vol. iii. p. 240.

general,

general, neither tall nor well made. Their arms, legs, and thighs, are thin, which is aſcribed to the poorneſs of their mode of living. Thoſe who inhabit the ſea coaſt depend almoſt entirely on fiſh for their ſuſtenance, relieved occaſionally by a repaſt on ſome large grubs which are found in the body of the dwarf gum tree. The very ſcanty ſtock of animals in the woods, and the very great labour neceſſary to take them, keep the inland natives in as poor a condition as their brethren on the coaſt. They are compelled to climb the talleſt trees after honey and the ſmaller animals, ſuch as the flying ſquirrel and the opoſſum. When the ſtems are of great height, and without branches, which is generally the caſe in thick foreſts, this is a proceſs of great labour, and is effected by cutting a notch with their ſtone hatchets for each foot ſucceſſively, while their left arm embraces the tree. Trees were obſerved notched in this manner to the height of eighty feet before the firſt branch, where the hungry ſavage could hope to meet with any reward for ſo much toil[a].

The woods, excluſive of the animals occa-

[a] Collins's Account of New South Wales, Appendix, p. 549. 4to.

ſionally found in them, afford but little ſuſtenance. A few berries, the yam, the fern root, and the flowers of the different bankſias, make up the whole of the vegetable catalogue[a].

A native with his child, ſurpriſed on the banks of the Hawkſbury river by ſome of our coloniſts, launched his canoe in a hurry, and left behind him a ſpecimen of his food, and of the delicacy of his ſtomach. From a piece of water-ſoaken wood, full of holes, he had been extracting and eating a large worm. The ſmell both of the worm and its habitation was in the higheſt degree offenſive. Theſe worms, in the language of the country, are called cah-bro; and a tribe of natives dwelling inland, from the circumſtance of eating theſe loathſome worms, is named Cah-brogal. The wood natives alſo make a paſte formed of the fern root, and the large and ſmall ants bruiſed together, and, in the ſeaſon, add the eggs of this inſect[b].

In a country, the inhabitants of which are driven to ſuch reſources for ſubſiſtence, where the ſupply of animal and vegetable food is ſo extremely ſcanty, and the labour neceſſary to

[a] Collins's Account of New South Wales, Appendix, p. 557. 4to.

[b] Id. Appen. p. 558.

procure

procure it is ſo ſevere, it is evident, that the population muſt be very thinly ſcattered in proportion to the territory. Its utmoſt bound muſt be very narrow. But when we advert to the ſtrange and barbarous cuſtoms of theſe people, the cruel treatment of their women, and the difficulty of rearing children; inſtead of being ſurpriſed that it does not more frequently preſs to paſs theſe bounds, we ſhall be rather inclined to conſider even theſe ſcanty reſources as more than ſufficient to ſupport all the population that could grow up under ſuch circumſtances.

The prelude to love in this country is violence, and of the moſt brutal nature. The ſavage ſelects his intended wife from the women of a different tribe, generally one at enmity with his own. He ſteals upon her in the abſence of her protectors, and having firſt ſtupified her with blows of a club, or wooden ſword, on the head, back, and ſhoulders, every one of which is followed by a ſtream of blood, he drags her through the woods by one arm, regardleſs of the ſtones and broken pieces of trees that may lie in his route, and anxious only to convey his prize in ſafety to his own party. The woman thus treated be-

comes his wife, and is incorporated into the tribe to which he belongs, and but ſeldom quits him for another. The outrage is not reſented by the relations of the female, who only retaliate by a ſimilar outrage when it is in their power.[a]

The union of the ſexes take place at an early age, and inſtances were known to our coloniſts of very young girls having been much and ſhamefully abuſed by the males[b].

The conduct of the huſband to his wife, or wives, ſeems to be nearly in character with this ſtrange and barbarous mode of courtſhip. The females bear on their heads the traces of the ſuperiority of the males, which is exerciſed almoſt as ſoon as they find ſtrength in their arms to inflict a blow. Some of theſe unfortunate beings have been obſerved with more ſcars on their ſhorn heads cut in every direction, than could well be counted. Mr. Collins feelingly ſays, "The condition of theſe women is ſo wretched, "that I have often, on ſeeing a female child "borne on its mother's ſhoulders, anticipated "the miſeries to which it was born, and thought "it would be a mercy to deſtroy it[c]." In

[a] Collins's N. S. Wales, Appen. p. 559. [b] Appen. p. 563.
[c] Appen. p. 583.

another

another place, ſpeaking of Bennilong's wife being delivered of a child, he ſays, "I here find "in my papers a note that for ſome offence "Bennilong had ſeverely beaten this woman in "the morning, a ſhort time before ſhe was "delivered[a]."

Women treated in this brutal manner muſt neceſſarily be ſubject to frequent miſcarriages, and it is probable that the abuſe of very young girls, mentioned above as common, and the too early union of the ſexes in general, would tend to prevent the females from being prolific. Inſtances of a plurality of wives were found more frequent than of a ſingle wife; but what is extraordinary, Mr. Collins did not recollect ever to have noticed children by more than one. He had heard from ſome of the natives, that the firſt wife claimed an excluſive right to the conjugal embrace, while the ſecond was merely the ſlave and drudge of both.[b].

An abſolutely excluſive right in the firſt wife to the conjugal embrace ſeems to be hardly probable; but it is poſſible that the ſecond wife might not be allowed to rear her offſpring. At any rate, if the obſervation be generally true, it

[a] Collins's N. S. Wales, Appen. note p. 562.

[b] Appen. p. 560.

proves that many of the women are without children, which can only be accounted for from the very ſevere hardſhips which they undergo, or from ſome particular cuſtoms which may not have come to the knowledge of Mr. Collins.

If the mother of a ſucking child die, the helpleſs infant is buried alive in the ſame grave with its mother. The father himſelf places his living child on the body of his dead wife, and having thrown a large ſtone upon it, the grave is inſtantly filled by the other natives. This dreadful act was performed by Co-le-be, a native well known to our coloniſts, and who, on being talked to on the ſubject, juſtified the proceeding, by declaring that no woman could be found who would undertake to nurſe the child, and that therefore it muſt have died a much worſe death than that which he had given it. Mr. Collins had reaſon to believe that this cuſtom was generally prevalent, and obſerves, that it may in ſome meaſure account for the thinneſs of the population[a].

Such a cuſtom, though in itſelf perhaps it might not much affect the population of a

[a] Collins's N. S. Wales, Appendix, p. 607.

country,

country, places in a ſtrong point of view the difficulty of rearing children in ſavage life. Women obliged by their habits of living to a conſtant change of place, and compelled to an unremitting drudgery for their huſbands, appear to be abſolutely incapable of bringing up two or three children nearly of the ſame age. If another child be born before the one above it can ſhift for itſelf, and follow its mother on foot, one of the two muſt almoſt neceſſarily periſh for want of care. The taſk of rearing even one infant, in ſuch a wandering and laborious life, muſt be ſo troubleſome and painful, that we are not to be ſurpriſed that no woman can be found to undertake it who is not prompted by the powerful feelings of a mother.

To theſe cauſes, which forcibly repreſs the riſing generation, muſt be added thoſe which contribute ſubſequently to deſtroy it; ſuch as the frequent wars of theſe ſavages with different tribes, and their perpetual conteſts with each other; their ſtrange ſpirit of retaliation and revenge which prompts the midnight murder, and the frequent ſhedding of innocent blood; the ſmoke and filth of their miſerable habitations, and their poor mode of living, productive of loathſome cutaneous diſorders; and above all

a dreadful epidemic like the ſmall-pox, which ſweeps off great numbers[a].

In the year 1789 they were viſited by this epidemic which raged among them with all the appearance and virulence of the ſmall-pox. The deſolation that it occaſioned was almoſt incredible. Not a living perſon was to be found in the bays and harbours that were before the moſt frequented. Not a veſtige of a human foot was to be traced on the ſands. They had left the dead to bury the dead. The excavations in the rocks were filled with putrid bodies, and in many places the paths were covered with ſkeletons[b].

Mr. Collins was informed, that the tribe of Co-le-be, the native mentioned before, had been reduced by the effects of this dreadful diſorder to three perſons, who found themſelves obliged to unite with ſome other tribe to prevent their utter extinction[c].

Under ſuch powerful cauſes of depopulation, we ſhould naturally be inclined to ſuppoſe that the animal and vegetable produce of the country

[a] See generally, the Appendix to Collins's Account of the Engliſh Colony in New South Wales.

[b] Collins's N. S. Wales, Appendix, p. 597.

[c] Id. Appendix, p. 598.

would

would be increaſing upon the thinly ſcattered inhabitants, and, added to the ſupply of fiſh from their ſhores, would be more than ſufficient for their conſumption; yet it appears upon the whole, that the population is in general ſo nearly on a level with the average ſupply of food, that every little deficiency from unfavourable weather, or other cauſes, occaſions diſtreſs. Particular times, when the inhabitants ſeemed to be in great want, are mentioned as not uncommon, and at theſe periods, ſome of the natives were found reduced to ſkeletons, and almoſt ſtarved to death[a].

[a] Collins's N. S. Wales, c. iii. p. 34. and Appen. p. 551.

CHAP. IV.

Of the Checks to Population among the American Indians.

WE may next turn our view to the vaſt continent of America, the greateſt part of which was found to be inhabited by ſmall independent tribes of ſavages ſubſiſting, nearly like the natives of New Holland, on the productions of unaſſiſted nature. The ſoil was covered by an almoſt univerſal foreſt, and preſented few of thoſe fruits and eſculent vegetables which grow in ſuch profuſion in the iſlands of the South Sea. The produce of a moſt rude and imperfect agriculture, known to ſome of the tribes of hunters, was ſo trifling as to be conſidered only as a feeble aid to the ſubſiſtence acquired by the chace. The inhabitants of this new world, therefore, might be conſidered as living principally by hunting and fiſhing[a]; and the narrow limits to this mode of ſubſiſtence are obvious.

[a] Robertſon's Hiſtory of America, vol. ii. b. iv. p. 127. et ſeq. octavo edit. 1780.

The

The ſupplies derived from fiſhing could extend only to thoſe who were within a certain diſtance of the lakes, the rivers, or the ſea-ſhore; and the ignorance and indolence of the improvident ſavage would frequently prevent him from extending the benefits of theſe ſupplies much beyond the time when they were actually obtained. The great extent of territory required for the ſupport of the hunter has been repeatedly ſtated and acknowledged[a]. The number of wild animals within his reach, combined with the facility with which they may be either killed or enſnared, muſt neceſſarily limit the number of his ſociety. The tribes of hunters, like beaſts of prey, whom they reſemble in their mode of ſubſiſtence, will conſequently be thinly ſcattered over the ſurface of the earth. Like beaſts of prey, they muſt either drive away or fly from every rival, and be engaged in perpetual conteſts with each other[b].

Under ſuch circumſtances, that America ſhould be very thinly peopled in proportion to its extent of territory, is merely an exemplification of the obvious truth, that population cannot increaſe without the food to ſupport it.

[a] Franklin's Miſcell. p. 2. [b] Robertſon, b. iv. p. 129.

But

But the intereſting part of the inquiry, that part to which I would wiſh particularly to draw the attention of the reader, is, the mode by which the population is kept down to the level of this ſcanty ſupply. It cannot eſcape obſervation, that an inſufficient ſupply of food to any people, does not ſhew itſelf merely in the ſhape of famine, but in other more permanent forms of diſtreſs, and in generating certain cuſtoms, which operate ſometimes with greater force in the ſuppreſſion of a riſing population, than in its ſubſequent deſtruction.

It was generally remarked, that the American women were far from being prolific[a]. This unfruitfulneſs has been attributed by ſome to a want of ardour in the men towards their women, a feature of character, which has been conſidered as peculiar to the American ſavage. It is not however peculiar to

[a] Robertſon, b. iv. p. 106. Burke's America, vol. i. p. 187. Charlevoix, Hiſt. de la Nouvelle France, tom. iii. p. 304. Lafitau, Mœurs des Sauvages, tom. i. p. 590. In the courſe of this chapter I often give the ſame references as Robertſon; but never, without having examined and verified them myſelf. Where I have not had an opportunity of doing this, I refer to Robertſon alone.

this

this race; but probably exiſts in a great degree among all barbarous nations, whoſe food is poor and inſufficient, and who live in a conſtant apprehenſion of being preſſed by famine, or by an enemy. Bruce frequently takes notice of it, particularly in reference to the Galla and Shangalla, ſavage nations on the borders of Abyſſinia[a], and le Vaillant mentions the phlegmatic temperament of the Hottentots as the chief reaſon of their thin population[b]. It ſeems to be generated by the hardſhips and dangers of ſavage life, which take off the attention from the ſexual paſſion. And that theſe are the principal cauſes of it among the Americans, rather than any abſolute conſtitutional defect, appears probable, from its diminiſhing nearly in proportion to the degree in which theſe cauſes are mitigated or removed. In thoſe countries of America, where from peculiar ſituation or further advantages in improvement, the hardſhips of ſavage life are leſs ſeverely felt, the paſſion between the ſexes becomes more ardent. Among ſome of the tribes ſeated on the banks of rivers well ſtored with fiſh, or others that inhabit a territory greatly

[a] Travels to diſcover the Source of the Nile, vol. ii. p. 223. 559.

[b] Voyage dans l'Interieur de l'Afrique, tom. i. p. 12, 13.

abounding

abounding in game or much improved in agriculture, the women are more valued and admired; and as hardly any reſtraint is impoſed on the gratification of deſire, the diſſolution of their manners is ſometimes exceſſive[a].

If we do not then conſider this apathy of the Americans as a natural defect in the bodily frame, but merely as a general coldneſs, and an infrequency of the calls of the ſexual appetite, we ſhall not be inclined to give much weight to it as affecting the number of children to a marriage; but ſhall be diſpoſed to look for the cauſe of this unfruitfulneſs in the condition and cuſtoms of the women in a ſavage ſtate. And here we ſhall find reaſons amply ſufficient to account for the fact in queſtion.

It is finely obſerved by Dr. Robertſon, that "Whether man has been improved by the "progreſs of arts and civilization, is a queſtion "which in the wantonneſs of diſputation has "been agitated among philoſophers. That "women are indebted to the refinement of po-"liſhed manners for a happy change in their

[a] Robertſon, b. iv. p. 71. Letters Edif. & Curieuſes, tom. vi. p. 48. 322, 330, tom. vii. p. 20. 12mo. edit. 1780. Charlevoix, tom. iii. p. 303, 423. Hennepin, Mœurs des Sauvages, p. 37.

"ſtate,

" ſtate, is a point which can admit of no " doubt[a]." In every part of the world, one of the moſt general characteriſtics of the ſavage is to deſpiſe and degrade the female ſex[b]. Among moſt of the tribes in America their condition is ſo peculiarly grievous, that ſervitude is a name too mild to deſcribe their wretched ſtate. A wife is no better than a beaſt of burden. While the man paſſes his days in idleneſs or amuſement, the woman is condemned to inceſſant toil. Taſks are impoſed upon her without mercy, and ſervices are received without complacence or gratitude[c]. There are ſome diſtricts in America where this ſtate of degradation has been ſo ſeverely felt, that mothers have deſtroyed their female infants, to deliver them at once from a life in which they were doomed to ſuch a miſerable ſlavery[d].

This ſtate of depreſſion and conſtant labour

[a] Robertſon, b. iv. p. 103.

[b] Robertſon, b. iv. p. 103. Letters Edif. paſſim. Charlevoix Hiſt. Nouv. Fr. tom. iii. p. 287. Voy. de Pérouſe, c. ix. p. 402, 4to. London.

[c] Robertſon, b. iv. p. 105. Lettres Edif. tom. vi. p. 329. Major Roger's North America, p. 211. Creuxii Hiſt. Canad. p. 57.

[d] Robertſon, b. iv. p. 106. Raynal, Hiſt. des Indes, tom. iv. c. vii. p. 110. 8vo. 10 vol. 1795.

added

added to the unavoidable hardſhips of ſavage life muſt be very unfavourable to the office of child-bearing[a]; and the libertinage which generally prevails among the women before marriage, with the habit of procuring abortions, muſt neceſſarily render them more unfit for bearing children afterwards[b]. One of the miſſionaries ſpeaking of the common practice among the Natchez of changing their wives, adds, unleſs they have children by them; a proof, that many of theſe marriages were unfruitful, which may be accounted for from the libertine lives of the women before wedlock, which he had previouſly noticed[c].

The cauſes that Charlevoix aſſigns of the ſterility of the American women, are, the ſuckling their children for ſeveral years, during which time they do not cohabit with their huſbands; the exceſſive labour to which they are always condemned in whatever ſituation they may be; and the cuſtom eſtabliſhed in many places of

[a] Robertſon, b. iv. p. 106. Creuxii Hiſt. Canad. p. 57. Lafitau, tom. i. p. 590.

[b] Robertſon. b. iv. p. 72. Ellis's Voyage, p. 198. Burke's America, vol. i. p. 187.

[c] Lettres Edif. tom. vii. p. 20. 22.

permitting

permitting the young women to proſtitute themſelves before marriage. Added to this, he ſays, the extreme miſery to which theſe people are ſometimes reduced takes from them all deſire of having children[a]. Among ſome of the ruder tribes it is a maxim not to burden themſelves with rearing more than two of their offspring[b]. When twins are born one of them is commonly abandoned, as the mother cannot rear them both; and when a mother dies during the period of ſuckling her child, no chance of preſerving its life remains, and, as in New Holland, it is buried in the ſame grave with the breaſt that nouriſhed it[c].

As the parents are frequently expoſed to want themſelves, the difficulty of ſupporting their children becomes at times ſo great, that they are reduced to the neceſſity of abandoning or deſtroying them[d]. Deformed children are very generally expoſed; and among ſome of the tribes in South America, the children of mothers who do not bear their labours well experience a

[a] Charlevoix, N. Fr. tom. iii. p. 304.
[b] Robertſon, b. iv. p. 107. Lettres Edif. tom. ix. p. 140.
[c] Robertſon, b. iv. p. 107. Lettres Edif. tom. viii. p. 86.
[d] Robertſon, b. iv. p. 108.

ſimilar fate from a fear that the offſpring may inherit the weakneſs of its parent[a].

To cauſes of this nature we muſt aſcribe the remarkable exemption of the Americans from deformities of make. Even when a mother endeavours to rear all her children without diſtinction, ſuch a proportion of the whole number periſhes under the rigorous treatment that muſt be their lot in the ſavage ſtate, that probably none of thoſe who labour under any original weakneſs or infirmity can attain the age of manhood. If they be not cut off as ſoon as they are born, they cannot long protract their lives under the ſevere diſcipline that awaits them[b]. In the Spaniſh provinces, where the Indians do not lead ſo laborious a life, and are prevented from deſtroying their children, great numbers of them are deformed, dwarfiſh, mutilated, blind and deaf[c].

Polygamy ſeems to have been generally allowed among the Americans, but the privilege was ſeldom uſed, except by the Caciques and

[a] Lafitau, Mœurs de Sauv. tom. i. p. 592.

[b] Charlevoix, tom. iii. p. 303. Raynal, Hiſt. des Indes, tom. viii. l. xv. p. 22. [c] Robertſon, b. iv p. 73. Voyage d'Ulloa, tom. i. p. 232.

chiefs,

chiefs, and now and then by others in ſome of the fertile provinces of the South, where ſubſiſtence was more eaſily procured. The difficulty of ſupporting a family confined the maſs of the people to one wife[a]; and this difficulty was ſo generally known and acknowledged, that fathers, before they conſented to give their daughters in marriage, required unequivocal proofs in the ſuitor of his ſkill in hunting, and his conſequent ability to ſupport a wife and children[b]. The women, it is ſaid, do not marry early[c]; and this ſeems to be confirmed by the libertinage among them before marriage, ſo frequently taken notice of by the miſſionaries and other writers[d].

The cuſtoms above enumerated, which appear to have been generated principally by the experience of the difficulties attending the rearing of a family, combined with the number of children that muſt neceſſarily periſh under the hardſhips of ſavage life, in ſpite of the beſt

[a] Robertſon, b. iv. p. 102. Lettres Edif. tom. viii. p. 87.
[b] Lettres Edif. tom. ix. p. 364. Robertſon, b. iv. p. 115.
[c] Robertſon, b. iv. p. 107. [d] Lettres Edif. paſſim. Voyage d'Ulloa, tom. i. p. 343. Burke's America, vol. i. p. 187. Charlevoix, tom. iii. p. 303, 304.

efforts of their parents to ſave them[a], muſt, without doubt, moſt powerfully repreſs the riſing generation,

When the young ſavage has paſſed ſafely through the perils of his childhood, other dangers ſcarcely leſs formidable await him on his approach to manhood. The diſeaſes to which man is ſubject in the ſavage ſtate, though fewer in number are more violent and fatal than thoſe which prevail in civilized ſociety. As ſavages are wonderfully improvident, and their means of ſubſiſtence always precarious, they often paſs from the extreme of want to exuberant plenty, according to the viciſſitudes of fortune in the chace, or to the variety in the productions of the ſeaſons[b]. Their inconſiderate gluttony in the one caſe, and their ſevere abſtinence in the other, are equally prejudicial to the human conſtitution; and their vigour is accordingly at ſome ſeaſons impaired by want, and at others by a ſuperfluity of groſs aliment, and the diſorders ariſing from indigeſtions[c]. Theſe, which

[a] Creuxius ſays, that ſcarcely one in thirty reaches manhood, (Hiſt. Canad. p. 57); but this muſt be a very great exaggeration.

[b] Robertſon, b. iv. p. 85. [c] Charlevoix, tom. iii. p. 302, 303.

may

may be conſidered as the unavoidable conſequence of their mode of living, cut off coſiderable numbers in the prime of life. They are likewiſe extremely ſubject to conſumptions, to pleuritic, aſthmatic, and paralytic diſorders, brought on by the immoderate hardſhips and fatigues which they endure in hunting and war, and by the inclemency of the ſeaſons to which they are continually expoſed[a].

The miſſionaries ſpeak of the Indians in South America as ſubject to perpetual diſeaſes for which they know no remedy[b]. Ignorant of the uſe of the moſt ſimple herbs, or of any change in their groſs diet, they die of theſe diſeaſes in great numbers. The jeſuit Fauque ſays, that in all the different excurſions which he had made, he ſcarcely found a ſingle individual of an advanced age[c]. Robertſon determines the period of human life to be ſhorter among ſavages than in well-regulated and induſtrious communities[d]. Raynal, notwithſtanding his frequent declamations in favour of ſavage life, ſays of the Indians of Canada, that few are ſo long lived as our people whoſe manner of living is more uni-

[a] Robertſon, b. iv. p. 86. Charlevoix, tom. iii. p. 364. Lafitau, tom. ii. p. 360,361. [b] Lettres Edif. tom. viii. p. 83. [c] Lettres Edif. tom. vii. p. 317. et ſeq. [d] b. iv. p. 86.

form and tranquil[a]. And Cook and Pérouſe confirm theſe opinions in the remarks which they make on ſome of the inhabitants of the northweſt coaſt of America[b].

In the vaſt plains of South America, a burning ſun operating on the extenſive ſwamps and the indundations that ſucceed the rainy ſeaſons, ſometimes generates dreadful epidemics. The miſſionaries ſpeak of contagious diſtempers as frequent among the Indians, and occaſioning at times a great mortality in their villages[c]. The ſmall-pox every where makes great ravages, as, from want of care and from confined habitations, very few that are attacked recover from it[d]. The Indians of Paraguay are ſaid to be extremely ſubject to contagious diſtempers, notwithſtanding the care and attentions of the Jeſuits. The ſmall-pox and malignant fevers, which, from the ravages they make, are called plagues, frequently deſolate theſe flouriſhing miſſions, and, according to Ulloa, were the cauſe that they had not increaſed in proportion to the

[a] Raynal, b. xv. p. 23. [b] Cook, third Voy. vol. iii. ch. ii. p. 520. Voy. de Pérouſe, ch. ix. [c] Lettres Edif. tom. viii. p. 79. 339. tom. ix. p. 125. [d] Voyage d'Ulloa, tom. i. p. 349.

time

time of their eſtabliſhment, and the profound peace which they had enjoyed [a].

Theſe epidemics are not confined to the ſouth. They are mentioned as if they were not uncommon among the more northern nations [b]; and in a late voyage to the northweſt coaſt of America captain Vancouver gives an account of a very extraordinary deſolation apparently produced by ſome diſtemper of this kind. From New Dungeneſs he traverſed a hundred and fifty miles of the coaſt without ſeeing the ſame number of inhabitants. Deſerted villages were frequent, each of which was large enough to contain all the ſcattered ſavages that had been obſerved in that extent of country. In the different excurſions which he made, particularly about Port Diſcovery, the ſkulls, limbs, ribs, and back-bones, or ſome other veſtiges of the human body, were ſcattered promiſcuouſly in great numbers; and, as no warlike ſcars were obſerved on the bodies of the remaining Indians, and no particular ſigns of fear and ſuſpicion, the moſt probable conjecture ſeems to be, that this depopulation muſt have been occaſioned by peſti-

[a] Voyage d'Ulloa, tom. i. p. 549.

[b] Lettre Edif. tom. vi. p. 335.

lential diſeaſe[a]. The ſmall pox appears to be common and fatal among the Indians on this coaſt. Its indelible marks were obſerved on many, and ſeveral had loſt the ſight of one eye from it[b].

In general, it may be remarked of ſavages, that from their extreme ignorance, the dirt of their perſons, and the cloſeneſs and filth of their cabins[c], they loſe the advantage which uſually attends a thinly-peopled country, that of being more exempt from peſtilential diſeaſes, than thoſe which are fully inhabited. In ſome parts of America the houſes are built for the reception of many different families, and fourſcore or a hundred people are crowded together under the ſame roof. When the families live ſeparately, the huts are extremely ſmall, cloſe, and wretched, without windows, and with the doors ſo low, that it is neceſſary to creep on the hands and knees to enter them[d]. On the north-weſt coaſt of America, the houſes are in general of the

[a] Vancouver's Voy. vol. i. b. ii. c. v. p. 256. [b] Id. c. iv. p. 242. [c] Charlevoix ſpeaks in the ſtrongeſt terms of the extreme filth and ſtench of the American cabins, "On ne "peut entrer dans leur cabanes qu'on ne ſoit impeſté;" and the dirt of their meals, he ſays, "vous feroit horreur." Vol. iii. p. 338. [d] Robertſon, b. iv. p. 182. Voyage d'Ulloa, tom. i. p. 340.

large kind; and Meares deſcribes one of moſt extraordinary dimenſions belonging to a chief near Nootka Sound, in which eight hundred perſons ate, ſat, and ſlept [a]. All voyagers agree with reſpect to the filth of the habitations, and the perſonal naſtineſs of the people on this coaſt [b]. Captain Cook deſcribes them as ſwarming with vermin, which they pick off and eat [c]; and the naſtineſs and ſtench of their houſes, he ſays, is equal to their confuſion [d]. Pérouſe declares that their cabins have a naſtineſs and ſtench to which the den of no known animal in the world can be compared [e].

Under ſuch circumſtances, it may be eaſily imagined what a dreadful havoc an epidemic muſt make, when once it appears among them; and it does not ſeem improbable, that the degree of filth deſcribed ſhould generate diſtempers of this nature, as the air of their houſes cannot be much purer than the atmoſphere of the moſt crowded cities.

Thoſe who eſcape the dangers of infancy and of diſeaſe are conſtantly expoſed to the chances

[a] Meares's Voyage, ch. xii. p. 138. [b] Id. ch. xxiii. p. 252. Vancouver's Voy. vol. iii. b. vi. c. i. p. 313.
[c] Cook's 3d Voyage, vol. ii. p. 305. [d] c. iii. p. 316.
[e] Voy. de Pérouſe, ch. ix. p. 403.

of

of war; and notwithſtanding the extreme caution of the Americans in conducting their military operations, yet as they ſeldom enjoy any interval of peace, the waſte of their numbers in war is conſiderable [a]. The rudeſt of the American nations are well acquainted with the rights of each community to its own domains [b]. And as it is of the utmoſt conſequence to prevent others from deſtroying the game in their hunting grounds, they guard this national property with a jealous attention. Innumerable ſubjects of diſpute neceſſarily ariſe. The neighbouring nations live in a perpetual ſtate of hoſtility with each other [c]. The very act of increaſing in one tribe muſt be an act of aggreſſion on its neighbours, as a larger range of territory will be neceſſary to ſupport its increaſed numbers. The conteſt will in this caſe naturally continue, either till the equilibrium is reſtored by mutual loſſes, or till the weaker party is exterminated, or driven from its country. When the irruption of an enemy deſolates their cultivated lands, or drives them from their hunting grounds, as they have

[a] Charlevoix, Hiſt. N. Fr. tom. iii. 202, 203, 429.

[b] Robertſon, b. iv. p. 147. [c] Ibid. Lettres Edif. tom. viii. p. 40, 86, & paſſim. Cook's 3d Voy. vol. ii. p. 324. Meares's Voy. ch. xxiv. p. 267.

ſeldom

ſeldom any portable ſtores, they are generally reduced to extreme want. All the people of the diſtrict invaded are frequently forced to take refuge in woods or mountains which can afford them no ſubſiſtence, and where many of them periſh[a]. In ſuch a flight each conſults alone his individual ſafety. Children deſert their parents, and parents conſider their children as ſtrangers. The ties of nature are no longer binding. A father will ſell his ſon for a knife or a hatchet[b]. Famine and diſtreſſes of every kind complete the deſtruction of thoſe whom the ſword had ſpared; and in this manner whole tribes are frequently extinguiſhed[c].

Such a ſtate of things has powerfully contributed to generate that ferocious ſpirit of warfare obſervable among ſavages in general, and moſt particularly among the Americans. Their object in battle is not conqueſt, but deſtruction[d]. The life of the victor depends on the death of his enemy; and, in the rancour and fell ſpirit of revenge with which he purſues him, he ſeems conſtantly to bear in mind the diſtreſſes that

[a] Robertſon, b. iv. p. 1 2 Charlevoix, N. Fr. tom. iii. p. 203. [b] Lettres Edif. tom. viii. p. 346. [c] Robertſon, b. iv. p. 172. Account of N. America, by Major Rogers, p. 250. [d] Robertſon, b. iv. p. 150.

would

would be conſequent on defeat. Among the Iroquois, the phraſe by which they expreſs their reſolution of making war againſt an enemy, is, "Let us go and eat that nation." If they ſolicit the aid of a neighbouring tribe, they invite it to eat broth made of the fleſh of their enemies[a]. Among the Abnakis, when a body of their warriors enters an enemy's territory, it is generally divided into different parties of thirty or forty; and the chief ſays to each, to you is given ſuch a hamlet to eat, to you ſuch a village[b], &c. Theſe expreſſions remain in the language of ſome of the tribes, in which the cuſtom of eating their priſoners taken in war no longer exiſts. Cannibaliſm, however, undoubtedly prevailed in many parts of the new world[c]; and, contrary to the opinion of Dr. Robertſon, I cannot but think that it muſt have had its origin in extreme want, though the cuſtom might afterwards be continued from other motives. It ſeems to be a worſe compliment to human nature, and to the ſavage ſtate, to attribute this horrid repaſt to malignant paſſions, without the goad of neceſſity, rather than to the great law of ſelf-preſervation, which has at

[a] Robertſon, b. iv. p. 164. [b] Lettres Edif. tom. vi. p. 205.
[c] Robertſon, b. iv. p. 164.

times

times overcome every other feeling even among the moſt humane and civilized people. When once it had prevailed, though only occaſionally, from this cauſe, the fear that a ſavage might feel of becoming a repaſt to his enemies, might eaſily raiſe the paſſion of rancour and revenge to ſo high a pitch, as to urge him to treat his priſoners in this way, though not prompted at the time by hunger.

The miſſionaries ſpeak of ſeveral nations, which appeared to uſe human fleſh whenever they could obtain it, as they would the fleſh of any of the rarer animals[a]. Theſe accounts may perhaps be exaggerated, though they ſeem to be confirmed in a great degree by the late voyages to the northweſt coaſt of America, and by Captain Cook's deſcription of the ſtate of ſociety in the ſouthern iſland of New Zealand[b]. The people of Nootka Sound appear to be cannibals[c], and the chief of the diſtrict Maquinna

[a] Lettres Edif. tom. viii. p. 105, 271. tom. vi. p. 266.

[b] Cautious as Captain Cook always is, he ſays of the New Zealanders, "it was but too evident that they have a great liking "for this kind of food." Second Voy. vol. i. p. 246. And in the laſt voyage, ſpeaking of their perpetual hoſtilities, he ſays, "and perhaps the deſire of a good meal may be no ſmall "incitement." Vol. i. p. 137.

[c] Cook's Third Voy. vol. ii. p. 271.

is ſaid to be ſo addicted to this horrid banquet, that, in cold blood, he kills a ſlave every moon to gratify his unnatural appetite[a].

The predominant principle of ſelf-preſervation, connected in the breaſt of the ſavage, moſt intimately, with the ſafety and power of the community to which he belongs, prevents the admiſſion of any of thoſe ideas of honour and gallantry in war, which prevail among more civilized nations. To fly from an adverſary that is on his guard, and to avoid a conteſt where he cannot contend without riſk to his own perſon, and conſequently to his community, is the point of honour with the American. The odds of ten to one are neceſſary to warrant an attack on a perſon who is armed and prepared to reſiſt, and even then each is afraid of being the firſt to advance[b]. The great object of the moſt renowned warrior is by every art of cunning and deceit, by every mode of ſtratagem and ſurpriſe, that his invention can ſuggeſt, to weaken and deſtroy the tribes of his enemies with the leaſt poſſible loſs to his own. To meet an enemy on equal terms is regarded as extreme folly. To fall in battle, inſtead of being reckoned an

[a] Meares's Voy. ch. xxiiii. p. 255.

[b] Lettres Edif. tom. vi. p. 360.

honourable

honourable death [a], is a misfortune, which ſubjects the memory of a warrior to the imputation of raſhneſs and imprudence. But to lie in wait day after day, till he can ruſh upon his prey when moſt ſecure and leaſt able to reſiſt him; to ſteal in the dead of night upon his enemies, ſet fire to their huts, and maſſacre the inhabitants, as they fly naked and defenceleſs from the flames [b], are deeds of glory, which will be of deathleſs memory in the breaſts of his grateful countrymen.

This mode of warfare is evidently generated by a conſciouſneſs of the difficulties attending the rearing of new citizens under the hardſhips and dangers of ſavage life. And theſe powerful cauſes of deſtruction may in ſome inſtances be ſo great, as to keep down the population even conſiderably below the means of ſubſiſtence; but the fear that the Americans betray of any diminution of their ſociety, and their apparent wiſh to increaſe it, are no proofs that this is generally the caſe. The country could not probably ſupport the addition that is coveted in each ſociety; but an acceſſion of ſtrength to one tribe, opens to it new ſources of ſubſiſtence in the com-

[a] Charlevoix, N. Fr. tom. iii. p. 376. [b] Robertſon, b. iv. p. 155. Lettres Edif. tom. vi. p. 182, 360.

parative

parative weakneſs of its adverſaries; and, on the contrary, a diminution of its numbers, ſo far from giving greater plenty to the remaining members, ſubjects them to extirpation or famine from the irruptions of their ſtronger neighbours.

The Chiriguanes, originally only a ſmall part of the tribe of Guaranis, left their native country in Parraguay, and ſettled in the mountains towards Peru. They found ſufficient ſubſiſtence in their new country, increaſed rapidly, attacked their neighbours, and by ſuperior valour, or ſuperior fortune, gradually exterminated them, and took poſſeſſion of their lands; occupying a great extent of country, and having increaſed, in the courſe of ſome years, from three or four thouſand to thirty thouſand [a], while the tribes of their weaker neighbours were daily thinned by famine and the ſword.

Such inſtances prove the rapid increaſe even of the Americans under favourable circumſtances, and ſufficiently account for the fear which prevails in every tribe of diminiſhing its numbers, and the frequent wiſh to increaſe them [b],

[a] Lettres Edif. tom. viii. p. 243. Les Chiriguanes multiplierent prodigieuſement, et en aſſez peu d'années leur nombre monta a trente mille ames. [b] Lafitau, tom. ii. p. 163.

without

without ſuppoſing a ſuperabundance of food in the territory actually poſſeſſed.

That the cauſes[a] which have been mentioned as affecting the population of the Americans are principally regulated by the plenty or ſcarcity of ſubſiſtence, is ſufficiently evinced from the greater frequency of the tribes, and the greater numbers in each, throughout all thoſe parts of the country, where from the vicinity of lakes or rivers, the ſuperior fertility of the ſoil, or further advances in improvement, food becomes more abundant. In the interior of the provinces bordering on the Oronoco, ſeveral hundred miles may be traverſed in different directions without finding a ſingle hut, or obſerving the footſteps of a ſingle creature. In ſome parts of North America, where the climate is more rigorous, and the ſoil leſs fertile, the deſolation is ſtill greater. Vaſt tracts of ſome hundred leagues have been croſſed

[a] Theſe cauſes may perhaps appear more than ſufficient to keep the population down to the level of the means of ſubſiſtence; and they certainly would be ſo, if the repreſentations given of the unfruitfulneſs of the Indian women were univerſally or even generally true. It is probable that ſome of the accounts are exaggerated, but it is difficult to ſay which; and it muſt be acknowledged, that, even allowing for all ſuch exaggerations, they are amply ſufficient to eſtabliſh the point propoſed.

through uninhabited plains and foreſts[a]. The miſſionaries ſpeak of journies of twelve days without meeting with a ſingle ſoul[b], and of immenſe tracts of country, in which ſcarcely three or four ſcattered villages were to be found[c]. Some of theſe deſerts did not furniſh game[d], and were therefore entirely deſolate; others, which were to a certain degree ſtocked with it, were traverſed in the hunting ſeaſons by parties, who encamped and remained in different ſpots, according to the ſucceſs they met with, and were therefore really inhabited in proportion to the quantity of ſubſiſtence which they yielded[e].

Other diſtricts of America are deſcribed as comparatively fully peopled; ſuch as the borders of the great northern lakes, the ſhores of the Miſſiſippi, Louiſiana, and many provinces in South America. The villages here were large, and near each other, in proportion to the ſuperior fruitfulneſs of the territory in game and fiſh, and the advances made by the inhabitants in agriculture[f]. The Indians of the great and populous empires of Mexico and Peru ſprung undoubtedly from the ſame ſtock, and originally

[a] Robertſon, b. iv. p. 129, 130.

[b] Lettres Edif. tom vi. p. 357. [c] Lettres Edif. tom. vi. p. 341. [d] Lettres Edif. tom. ix. p. 145. [e] Lettres Edif. tom. vi. p. 66, 81, 345. tom. ix. p. 145. [f] Lettres Edif. tom. ix. p. 90, 142. Robertſon, b. iv. p. 141.

poſſeſſed

poſſeſſed the ſame cuſtoms as their ruder brethren; but the moment that, by a fortunate train of circumſtances, they were led to improve and extend their agriculture, a conſiderable population rapidly followed, in ſpite of the apathy of the men, or the deſtructive habits of the women. Theſe habits would indeed in a great meaſure yield to the change of circumſtances; and the ſubſtitution of a more quiet and ſedentary life, for a life of perpetual wandering and hardſhip, would immediately render the women more fruitful, and enable them at the ſame time to attend to the wants of a larger family.

In a general view of the American continent, as deſcribed by hiſtorians, the population ſeems to have been ſpread over the ſurface very nearly in proportion to the quantity of food, which the inhabitants of the different parts, in the actual ſtate of their induſtry and improvement, could obtain; and that, with few exceptions, it preſſed hard againſt this limit, rather than fell ſhort of it, appears from the frequent recurrence of diſtreſs for want of food in all parts of America.

Remarkable inſtances occur, according to Dr. Robertſon, of the calamities which rude nations

ſuffer by famine. As one of them, he mentions an account given by Alvar Nugnez Cabeca de Vaca, one of the Spaniſh adventurers, who reſided almoſt nine years among the ſavages of Florida. He deſcribes them as unacquainted with every ſpecies of agriculture, and living chiefly upon the roots of different plants, which they procure with great difficulty, wandering from place to place in ſearch of them. Sometimes they kill game, ſometimes they catch fiſh, but in ſuch ſmall quantities, that their hunger is ſo extreme, as to compel them to eat ſpiders, the eggs of ants, worms, lizards, ſerpents, a kind of unctuous earth, and, I am perſuaded, he ſays, that if in this country there were any ſtones, they would ſwallow them. They preſerve the bones of fiſhes and ſerpents, which they grind into powder and eat. The only ſeaſon when they do not ſuffer much from famine is when a certain fruit like the opuntia, or prickly-pear, is ripe; but they are ſometimes obliged to travel far from their uſual place of reſidence in order to find it. In another place, he obſerves, that they are frequently reduced to paſs two or three days without food[a].

Ellis, in his voyage to Hudſon's Bay, feelingly

[a] Robertſon, note 28. to p. 117. b. iv.

deſcribes

deſcribes the ſufferings of the Indians in that neighbourhood from extreme want. Having mentioned the ſeverity of the climate, he ſays, "Great as theſe hardſhips are which reſult "from the rigour of the cold, yet it may juſtly "be affirmed, that they are much inferior to "thoſe which they feel from the ſcarcity of "proviſions, and the difficulty they are under "of procuring them. A ſtory which is related "at the factories, and known to be true, will "ſufficiently prove this, and give the compaſ-"ſionate reader a juſt idea of the miſeries to "which theſe unhappy people are expoſed." He then gives an account of a poor Indian and his wife, who, on the failure of game, having eaten up all the ſkins which they wore as clothing, were reduced to the dreadful extremity of ſupporting themſelves on the fleſh of two of their children[a]. In another place he ſays, "It has "ſometimes happened, that the Indians who "come in ſummer to trade at the factories, "miſſing the ſuccours they expected, have been "obliged to ſinge off the hair from thouſands "of beaver ſkins in order to feed upon the "leather.[b]"

The Abbé Raynal, who is continually reaſon

[a] p. 196. [b] p. 194.

ing moſt inconſiſtently in his compariſons of ſavage and civilized life, though in one place he ſpeaks of the ſavage as morally ſure of a competent ſubſiſtence, yet in his account of the nations of Canada ſays, that though they lived in a country abounding in game and fiſh, yet in ſome ſeaſons, and ſometimes for whole years, this reſource failed them; and famine then occaſioned a great deſtruction among a people who were at too great a diſtance to aſſiſt each other[a].

Charlevoix, ſpeaking of the inconveniences and diſtreſſes to which the miſſionaries were ſubject, obſerves, that not unfrequently the evils which he had been deſcribing are effaced by a greater, in compariſon of which all the others are nothing. This is famine. It is true, ſays he, that the ſavages can bear hunger with as much patience as they ſhow careleſſneſs in providing againſt it; but they are ſometimes reduced to extremities beyond their power to ſupport[b].

It is the general cuſtom among moſt of the American nations, even thoſe which have made ſome progreſs in agriculture, to diſperſe them-

[a] Raynal, Hiſt. des Indes, tom. viii. l. xv. p. 22.

[b] Hiſt. N. Fr. tom. iii. p. 338.

ſelves

ſelves in the woods at certain ſeaſons of the year, and to ſubſiſt for ſome months on the produce of the chace, as a principal part of their annual ſupplies[a]. To remain in their villages expoſes them to certain famine[b]; and in the woods they are not always ſure to eſcape it. The moſt able hunters ſometimes fail of ſucceſs, even where there is no deficiency of game[c]; and in their foreſts, on the failure of this reſource, the hunter or the traveller is expoſed to the moſt cruel want[d]. The Indians in their hunting excurſions are ſometimes reduced to paſs three or four days without food[e]; and a miſſionary relates an account of ſome Iroquois who, on one of theſe occaſions, having ſupported themſelves as long as they could, by eating the ſkins which they had with them, their ſhoes, and the bark of trees, at length, in deſpair, ſacrificed ſome of the party to ſupport the reſt. Out of eleven, five only returned alive[f].

The Indians in many parts of South America

[a] Lettres Edif. tom. vi. p. 66, 81, 345. ix. 145.

[b] Lettres Edif. tom. vi. 82, 196, 197, 215. ix. 151.

[c] Charlevoix, N. Fr. tom. iii. p. 201. Hennepin, Mœurs des Sauv. p. 78. [d] Lettres Edif. tom. vi. p. 167, 220.

[e] Id. tom. vi. p. 33. [f] Id. tom. vi. p. 71.

live in extreme want[a], and are ſometimes deſtroyed by abſolute famines[b]. The iſlands, rich as they appeared to be, were peopled fully up to the level of their produce. If a few Spaniards ſettled in any diſtrict, ſuch a ſmall addition of ſupernumerary mouths ſoon occaſioned a ſevere dearth of proviſions[c]. The flouriſhing Mexican empire was in the ſame ſtate in this reſpect; and Cortez often found the greateſt difficulty in procuring ſubſiſtence for his ſmall body of ſoldiers[d]. Even the Miſſions of Paraguay, with all the care and foreſight of the Jeſuits, and notwithſtanding that their population was kept down by frequent epidemicks, were by no means totally exempt from the preſſure of want. The Indians of the Miſſion of St. Michael are mentioned as having at one time increaſed ſo much, that the lands capable of cultivation in their neighbourhood produced only half of the grain neceſſary for their ſupport[e]. Long droughts often deſtroyed their cattle[f], and occaſioned a failure of their crops; and on theſe occaſions ſome of the Miſſions were reduced to the moſt

[a] Lettres Edif. tom. vii. p. 383. ix. 140. [b] Id. tom. viii. p. 79. [c] Robertſon, b. iv. p. 121. Burke's America, vol. i. p. 30. [d] Robertſon, b. viii. p. 212. [e] Lettres Edif. tom. ix. p. 381. [f] Id. tom. ix. p. 191.

extreme

extreme indigence, and would have periſhed from famine, but for the aſſiſtance of their neighbours[a].

The late voyages to the northweſt coaſt of America confirm theſe accounts of the frequent preſſure of want in ſavage life, and ſhow the uncertainty of the reſource of fiſhing, which ſeems to afford, in general, the moſt plentiful harveſt of food that is furniſhed by unaſſiſted nature. The ſea on the coaſt near Nootka Sound is ſeldom or never ſo much frozen as to prevent the inhabitants from having acceſs to it, Yet from the very great precautions they uſe in laying up ſtores for the winter, and their attention to prepare and preſerve whatever food is capable of it for the colder ſeaſons, it is evident that the ſea at theſe times yields no fiſh; and it appears that they often undergo very great hardſhips from want of proviſions in the cold months[b]. During a Mr. Mackay's ſtay at Nootka Sound, from 1786 to 1787, the length and ſeverity of the winter occaſioned a famine. The ſtock of dried fiſh was expended, and no freſh ſupplies of any kind were to be caught, ſo that the natives were obliged to ſubmit to a fixed

[a] Lettres Edif. tom ix. p. 206, 38c.

[b] Meares's Voy. ch. xxiv. p. 266.

allowance,

allowance, and the chiefs brought every day to our countrymen the ſtated meal of ſeven dried herrings' heads. Mr. Meares ſays, that the peruſal of this gentleman's journal would ſhock any mind tinctured with humanity.[a]

Captain Vancouver mentions ſome of the people to the north of Nootka Sound as living very miſerably on a paſte made of the inner bark of the pine tree and cockles[b]. In one of the boat excurſions, a party of Indians was met with who had ſome halibut, but though very high prices were offered, they could not be induced to part with any. This, as Captain Vancouver obſerves, was ſingular, and indicated a very ſcanty ſupply[c]. At Nootka Sound in the year 1794 fiſh had become very ſcarce, and bore an exorbitant price; as, either from the badneſs of the ſeaſon, or from neglect, the inhabitants had experienced the greateſt diſtreſs for want of proviſions during the winter[d].

Pèrouſe deſcribes the Indians in the neighbourhood of Port Francois as living during the ſummer in the greateſt abundance by fiſhing, but expoſed in the winter to periſh from want[e].

[a] Meares's Voy. ch. xi. p. 132. [b] Vancouver's Voy. vol. ii. b. ii. c. ii. p. 273. [c] Id. p. 282. [d] Id. vol. iii. b. vi. c. i. p. 304. [e] Voy. de Pérouſe, ch. ix. p. 400.

It

It is not, therefore, as Lord Kaimes imagines, that the American tribes have never increaſed ſufficiently to render the paſtoral or agricultural ſtate neceſſary to them[a]; but, from ſome cauſe or other, they have not adopted in any great degree theſe more plentiful modes of procuring ſubſiſtence, and therefore cannot have increaſed ſo as to become populous. If hunger alone could have prompted the ſavage tribes of America to ſuch a change in their habits, I do not conceive that there would have been a ſingle nation of hunters and fiſhers remaining; but it is evident, that ſome fortunate train of circumſtances, in addition to this ſtimulus, is neceſſary for the purpoſe; and it is undoubtedly probable, that theſe arts of obtaining food will be firſt invented and improved in thoſe ſpots that are beſt ſuited to them, and where the natural fertility of the ſituation, by allowing a greater number of people to ſubſiſt together, would give the faireſt chance to the inventive powers of the human mind.

Among moſt of the American tribes that we have been conſidering, ſo great a degree of equality prevailed, that all the members of each

[a] Sketches of the Hiſt. of Man, vol. i. p. 99, 105. 8vo. 2d edit.

community

community would be nearly equal ſharers in the general hardſhips of ſavage life, and in the preſſure of occaſional famines. But in many of the more ſouthern nations, as in Bagota[a], and among the Natchez[b], and particularly in Mexico and Peru, where a great diſtinction of ranks prevailed, and the lower claſſes were in a ſtate of abſolute ſervitude[c], it is probable that, on occaſion of any failure of ſubſiſtence, theſe would be the principal ſufferers, and the poſitive checks to population would act almoſt excluſively on this part of the community.

The very extraordinary depopulation that has taken place among the American Indians, may appear to ſome to contradict the theory which is intended to be eſtabliſhed; but it will be found that the cauſes of this rapid diminution may all be reſolved into the three great checks to population that have been ſtated; and it is not aſſerted, that theſe checks, operating from particular circumſtances with unuſual force, may not in ſome inſtances be more powerful even than the principle of increaſe.

The inſatiable fondneſs of the Indians for

[a] Robertſon, b. iv. p. 141. [b] Lettres Edif. tom. vii. p. 21. Robertſon, b. iv. p. 139. [c] Robertſon, b. vii. p. 190, 243.

ſpirituous

ſpirituous liquors[a], which according to Charlevoix is a rage that paſſes all expreſſion[b], by producing among them perpetual quarrels and conteſts, which often terminate fatally, by expoſing them to a new train of diſorders which their mode of life unfits them to contend with, and by deadening and deſtroying the generative faculty in its very ſource, may alone be conſidered as a vice adequate to produce the preſent depopulation. In addition to this it ſhould be obſerved, that almoſt every where the connexion of the Indians with Europeans has tended to break their ſpirit, to weaken or to give a wrong direction to their induſtry, and in conſequence to diminiſh the ſources of ſubſiſtence. In St. Domingo, the Indians neglected purpoſely to cultivate their lands in order to ſtarve out their cruel oppreſſors[c]. In Peru and Chili, the forced induſtry of the natives was fatally directed to the digging into the bowels of the earth, inſtead of cultivating its ſurface; and among the northern nations, the extreme deſire to purchaſe European ſpirits directed the induſtry of the

[a] Major Rogers's Account of North America, p. 210.

[b] Charlevoix, tom. iii. p. 302. [c] Robertſon. b. ii, p. 185. Burke's America, vol. i. p. 300.

greateſt

greateſt part of them, almoſt excluſively, to the procuring of peltry for the purpoſe of this exchange[a], which would prevent their attention to the more fruitful ſources of ſubſiſtence, and at the ſame time tend rapidly to deſtroy the produce of the chace. The number of wild animals, in all the known parts of America, is probably even more diminiſhed than the number of people[b]. The attention to agriculture has every where ſlackened, rather than increaſed as might at firſt have been expected, from European connexion. In no part of America, either North or South, do we hear of any of the Indian nations living in great plenty, in conſequence of their diminiſhed numbers. It may not therefore be very far from the truth, to ſay, that even now, in ſpite of all the powerful cauſes of deſtruction that have been mentioned, the average population of the American nations is, with few exceptions, on a level with the average quantity of food, which in the preſent ſtate of their induſtry they can obtain.

[a] Charlevoix, N. Fr. tom. iii. p. 260.

[b] The general introduction of fire arms among the Indians has probably greatly contributed to the diminution of the wild animals.

CHAP. V.

Of the Checks to Population in the Iſlands of the South Sea.

THE Abbé Raynal ſpeaking of the ancient ſtate of the Britiſh iſles, and of iſlanders in general, ſays of them: "It is among theſe people "that we trace the origin of that multitude of "ſingular inſtitutions that retard the progreſs "of population. Anthropophagy, the caſtra-"tion of males, the infibulation of females, late "marriages, the conſecration of virginity, the "approbation of celibacy, the puniſhments ex-"erciſed againſt girls, who become mothers at "too early an age[a]," &c. Theſe cuſtoms cauſed by a ſuperabundance of population in iſlands have been carried, he ſays, to the continents, where philoſophers of our days are ſtill employed to inveſtigate the reaſon of them. The Abbé does not ſeem to be aware, that a ſavage tribe in America ſurrounded by enemies, or a civilized and populous nation hemmed in by others in the ſame ſtate, is in many reſpects

[a] Raynal, Hiſt. des Indes, vol. ii. lib. iii. p. 3. 10 vols. 8vo. 1795.

circumſtanced

circumſtanced like the iſlander. Though the barriers to a further increaſe of population be not ſo well defined, and ſo open to common obſervation, on continents as on iſlands, yet they ſtill preſent obſtacles that are nearly as inſurmountable; and the emigrant, impatient of the diſtreſſes which he felt in his own country, is by no means ſecure of finding relief in another. There is probably no iſland yet known, the produce of which could not be further increaſed. This is all that can be ſaid of the whole earth. Both are peopled up to their actual produce. And the whole earth is in this reſpect like an iſland. But as the bounds to the number of people on iſlands, particularly when they are of ſmall extent, are ſo narrow, and ſo diſtinctly marked, that every perſon muſt ſee and acknowledge them, an inquiry into the checks to population on thoſe of which we have the moſt authentic accounts may perhaps tend conſiderably to illuſtrate the preſent ſubject. The queſtion that is aſked in Captain Cook's firſt voyage, with reſpect to the thinly ſcattered ſavages of New Holland, "By what means the inhabitants "of this country are reduced to ſuch a number "as it can ſubſiſt[a]?" may be aſked with equal

[a] Cook's Firſt Voyage, vol. iii. p. 240. 4to.

propriety

propriety reſpecting the moſt populous iſlands in the South Sea, or the beſt peopled countries in Europe and Aſia. The queſtion, applied generally, appears to me to be highly curious, and to lead to the elucidation of ſome of the moſt obſcure, yet important points, in the hiſtory of human ſociety. I cannot ſo clearly and conciſely deſcribe the preciſe aim of the firſt part of the preſent work, as by ſaying, that it is an endeavour to anſwer this queſtion ſo applied.

Of the large iſlands of New Guinea, New Britain, New Caledonia and the New Hebrides, little is known with certainty. The ſtate of ſociety in them is probably very ſimilar to that which prevails among many of the ſavage nations of America. They appear to be inhabited by a number of different tribes who are engaged in frequent hoſtilities with each other. The chiefs have little authority; and private property being in conſequence inſecure, proviſions have been rarely found on them in abundance[a]. With the large iſland of New Zealand we are better acquainted; but not in a manner to give

[a] See the different accounts of New Guinea and New Britain, in the *Hiſtoire des Navigations aux terres Auſtrales*; and of New Caledonia and the New Hebrides in Cook's Second Voyage, vol. ii. b. iii.

us a favourable impreſſion of the ſtate of ſociety among its inhabitants. The picture of it drawn by captain Cook in his three different voyages contains ſome of the darkeſt ſhades, that are any where to be met with in the hiſtory of human nature. The ſtate of perpetual hoſtility in which the different tribes of theſe people live with each other, ſeems to be even more ſtriking than among the ſavages of any part of America[a]; and their cuſtom of eating human fleſh, and even their reliſh for that kind of food, are eſtabliſhed beyond a poſſibility of doubt[b]. Captain Cook, who is by no means inclined to exaggerate the vices of ſavage life, ſays of the natives in the neighbourhood of Queen Charlotte's Sound, "If I had followed the advice of all our "pretended friends, I might have extirpated "the whole race; for the people of each ham-"let or village, by turns, applied to me to de-"ſtroy the other. One would have thought it "almoſt impoſſible that ſo ſtriking a proof of "the divided ſtate in which theſe miſerable "people live, could have been aſſigned[c]." And in the ſame chapter further on, he ſays, "From

[a] Cook's Firſt Voyage, vol. ii. p. 345. Second Voyage, vol. i. p. 101. Third Voy. vol. i. p. 161. &c. [b] Second Voyage, vol. i. p. 246. [c] Third Voyage, vol. i. p. 124.

"my

" my own obſervations, and the information of " Taweiharooa, it appears to me, that the New " Zealanders muſt live under perpetual appre- " henſions of being deſtroyed by each other; " there being few of their tribes that have not, " as they think, ſuſtained wrongs from ſome " other tribes, which they are continually upon " the watch to revenge. And perhaps the de- " ſire of a good meal may be no ſmall incite- " ment.****Their method of executing their " horrible deſigns is by ſtealing upon the ad- " verſe party in the night; and if they find " them unguarded (which however, I believe " is very ſeldom the caſe) they kill every one " indiſcriminately, not even ſparing the women " and children. When the maſſacre is com- " pleted, they either feaſt and gorge themſelves " on the ſpot, or carry off as many of the dead " bodies as they can, and devour them at home " with acts of brutality too ſhocking to be de- " ſcribed.****To give quarter, or to take pri- " ſoners, makes no part of the military law, ſo " that the vanquiſhed can only ſave their lives " by flight. This perpetual ſtate of war, and de- " ſtructive method of conducting it, operates ſo " ſtrongly in producing habitual circumſpection,

" that one hardly ever finds a New Zealander " off his guard, either by night or by day[a]."

As theſe obſervations occur in the laſt voyage, in which the errors of former accounts would have been corrected, and as a conſtant ſtate of warfare is here repreſented as prevailing to ſuch a degree, that it may be conſidered as the principal check to the population of New Zealand, little need be added on this ſubject. We are not informed whether any cuſtoms are practiſed by the women unfavourable to population. If ſuch be known, they are probably never reſorted to, except in times of great diſtreſs; as each tribe will naturally wiſh to increaſe the numbers of its members, in order to give itſelf greater power of attack and defence. But the vagabond life which the women of the ſouthern iſland lead, and the conſtant ſtate of alarm in which they live, being obliged to travel and work with arms in their hands[b], muſt undoubtedly be very unfavourable to geſtation, and tend greatly to prevent large families.

Yet powerful as theſe checks to population are, it appears, from the recurrence of ſeaſons of

[a] Cook's Third Voy. vol. i. p. 137.
[b] Id. Second Voy. vol. i. p. 127.

ſcarcity,

ſcarcity, that they ſeldom repreſs the number of people below the average means of ſubſiſtence. "That ſuch ſeaſons there are" (Captain Cook ſays) "our obſervations leave us no room "to doubt[a]." Fiſh is a principal part of their food, which, being only to be procured on the ſea coaſt, and at certain times[b], muſt always be conſidered as a precarious reſource. It muſt be extremely difficult to dry and preſerve any conſiderable ſtores in a ſtate of ſociety ſubject to ſuch conſtant alarms; particularly, as we may ſuppoſe, that the bays and creeks moſt abounding in fiſh would moſt frequently be the ſubject of obſtinate conteſt, to people who were wandering in ſearch of food[c]. The vegetable productions are, the fern root, yams, clams, and potatoes[d]. The three laſt are raiſed by cultivation, and are ſeldom found on the ſouthern iſland where agriculture is but little known[e]. On the occaſional failure of theſe ſcanty reſources from unfavourable ſeaſons, it may be imagined that the diſtreſs muſt be dreadful. At ſuch periods it does not ſeem improbable, that the deſire of a good meal ſhould give additional force

[a] Cook's Firſt Voy. vol. iii. p. 66. [b] Id. p. 45.
[c] Id. Third Voy. vol. i. p. 157. [d] Id. Firſt Voy. iii. p. 43.
[e] Id. Firſt Voy. vol. ii. p. 405.

to the deſire of revenge, and that they ſhould be "perpetually deſtroying each other by violence, "as the only alternative of periſhing by "hunger[a]."

If we turn our eyes from the thinly ſcattered inhabitants of New Zealand, to the crowded ſhores of Otaheite and the Society Iſlands, a different ſcene opens to our view. All apprehenſion of dearth ſeems at firſt ſight to be baniſhed from a country that is deſcribed to be fruitful as the garden of the Heſperides[b]. But this firſt impreſſion would be immediately corrected by a moment's reflection. Happineſs and plenty have always been conſidered as the moſt powerful cauſes of increaſe. In a delightful climate where few diſeaſes are known, and the women are condemned to no ſevere fatigues, why ſhould not theſe cauſes operate with a force unparallelled in leſs favourable regions? Yet if they did, where could the population find room and food in ſuch circumſcribed limits? If the numbers in Otaheite, not 40 leagues in circuit, ſurpriſed Captain Cook, when he calculated them at two hundred and four thouſand[c], where could they be diſpoſed of in a ſingle century, when they

[a] Cook's Firſt Voy. vol. iii. p. 45. [b] Miſſionary Voy. Appendix, p. 347. [c] Cook's Second Voy. vol. i. p. 349.

would

would amount to above three millions, ſuppoſing them to double their numbers every twenty-five years[a]. Each iſland of the group would be in a ſimilar ſituation. The removal from one to another would be a change of place, but not a change of the ſpecies of diſtreſs. Effectual emigration, or effectual importation, would be utterly excluded, from the ſituation of the iſlands, and the ſtate of navigation among their inhabitants.

The difficulty here is reduced to ſo narrow a compaſs, is ſo clear, preciſe, and forcible, that we cannot eſcape from it. It cannot be anſwered in the uſual vague and inconſiderate manner, by talking of emigration, and further cultivation. In the preſent inſtance, we cannot but acknowledge, that the one is impoſſible, and the other glaringly inadequate. The fulleſt conviction muſt ſtare us in the face, that the

[a] I feel very little doubt that this rate of increaſe is much ſlower than would really take place, ſuppoſing every check to be removed. If Otaheite, with its preſent produce, were peopled only with a hundred perſons, the two ſexes in equal numbers, and each man conſtant to one woman, I cannot but think, that for five or ſix ſucceſſive periods, the increaſe would be more rapid than in any inſtance hitherto known, and that they would probably double their numbers in leſs than fifteen years.

people on this group of iſlands could not continue to double their numbers every twenty-five years; and before we proceed to inquire into the ſtate of ſociety on them, we muſt be perfectly certain, that unleſs a perpetual miracle render the women barren, we ſhall be able to trace ſome very powerful checks to population in the habits of the people.

The ſucceſſive accounts that we have received of Otaheite and the neighbouring iſlands, leave us no room to doubt the exiſtence of the Areeoie ſocieties[a] which have juſtly occaſioned ſo much ſurpriſe among civilized nations. They have been ſo often deſcribed, that little more need be ſaid of them here, than that promiſcuous intercourſe and infanticide appear to be their fundamental laws. They conſiſt excluſively of the higher claſſes; "and" (according to Mr. Anderſon[b]) "ſo agreeable is this licentious plan "of life to their diſpoſition, that the moſt

[a] Cook's Firſt Voy. vol. ii. p. 207. & ſeq. Second Voy. vol. i. p. 352. Third Voy. vol. ii. p. 157. & ſeq. Miſſionary Voy. Appendix, p. 347. 4to.

[b] Mr. Anderſon acted in the capacity of naturaliſt and ſurgeon in Cook's laſt voyage. Captain Cook and all the officers of the expedition ſeem to have had a very high opinion of his talents and accuracy of obſervation. His accounts therefore may be looked upon as of the firſt authority.

"beautiful

" beautiful of both ſexes thus commonly ſpend " their youthful days, habituated to the practice " of enormities that would diſgrace the moſt " ſavage tribes.****When an Eareeoie woman " is delivered of a child, a piece of cloth dipped " in water is applied to the mouth and noſe " which ſuffocates it[a]." Captain Cook obſerves, " It is certain, that theſe ſocieties greatly pre- " vent the increaſe of the ſuperior claſſes of " people of which they are compoſed[b]." Of the truth of this obſervation there can be no doubt.

Though no particular inſtitutions of the ſame nature have been found among the lower claſſes; yet the vices which form their moſt prominent features are but too generally ſpread. Infanticide is not confined to the Eareeoies. It is permitted to all; and as its prevalence, among the higher claſſes of the people, has removed from it all odium, or imputation of poverty, it is probably often adopted rather as a faſhion than a reſort of neceſſity, and appears to be practiſed familiarly and without reſerve.

It is a very juſt obſervation of Hume, that the permiſſion of infanticide generally contributes

[a] Cook's Third Voy. vol ii. p. 158, 159.
[b] Id. Second Voy. vol. i. p. 352.

to

to increaſe the population of a country[a]. By removing the fears of too numerous a family, it encourages marriage, and the powerful yearnings of nature prevent parents from reſorting to ſo cruel an expedient, except in extreme caſes. The faſhion of the Eareeoie ſocieties in Otaheite and its neighbouring iſlands may have made them an exception to this obſervation, and the cuſtom has probably here a contrary tendency.

The debauchery and promiſcuous intercourſe which prevail among the lower claſſes of people, though in ſome inſtances they may have been exaggerated, are eſtabliſhed to a great extent on unqueſtionable authority. Captain Cook, in a profeſſed endeavour to reſcue the women of Otaheite from a too general imputation of licentiouſneſs, acknowledges that there are more of this character here than in other countries, making at the ſame time a remark of a moſt deciſive nature, by obſerving, that the women who thus conduct themſelves do not in any reſpect lower their rank in ſociety, but mix indiſcriminately with thoſe of the moſt virtuous character[b].

The common marriages in Otaheite are with-

[a] Hume's Eſſays, vol. i. eſſay xi. p. 431. 8vo. 1764.

[b] Cook's Second Voy. vol. i. p. 187.

out

out any other ceremony than a preſent from the man to the parents of the girl. And this ſeems to be rather a bargain with them for permiſſion to try their daughter, than an abſolute contract for a wife. If the father ſhould think that he has not been ſufficiently paid for his daughter, he makes no ſcruple of forcing her to leave her friend, and to cohabit with another perſon who may be more liberal. The man is always at liberty to make a new choice. Should his conſort become pregnant, he may kill the child, and after that continue his connexion with the mother, or leave her, according to his pleaſure. It is only when he has adopted a child, and ſuffered it to live, that the parties are conſidered as in the marriage ſtate. A younger wife, however, may afterwards be joined to the firſt; but the changing of connexions is much more general than this plan, and is a thing ſo common, that they ſpeak of it with great indifference [a]. Libertiniſm before marriage ſeems to be no objection to a union of this kind ultimately.

The checks to population from ſuch a ſtate of ſociety would alone appear ſufficient to counteract the effects of the moſt delightful climate

[a] Cook's Third Voy. vol. ii. p. 157.

and

and the moſt exuberant plenty. Yet theſe are not all. The wars between the inhabitants of the different iſlands, and their civil contentions among themſelves, are frequent, and ſometimes carried on in a very deſtructive manner[a]. Beſides the waſte of human life in the field of battle, the conquerors generally ravage the enemy's teritory, kill or carry off the hogs and poultry, and reduce as much as poſſible the means of future ſubſiſtence. The iſland of Otaheite which in the years 1767 and 1768 ſwarmed with hogs and fowls, was in 1773 ſo ill ſupplied with theſe animals, that hardly any thing could induce the owners to part with them. This was attributed by Captain Cook principally to the wars which had taken place during that interval[b]. On Captain Vancouver's viſit to Otaheite in 1791, he found that moſt of his friends which he had left in 1777 were dead; that there had been many wars ſince that time, in ſome of which the chiefs of the weſtern diſtricts of Otaheite had joined the enemy; and that the king had been for a conſiderable time completely worſted, and his own

[a] Bougainville, Voy. autour du Monde, ch. iii. p. 217. Cook's Firſt Voy. vol. ii. p. 244. Miſſionary Voy. p. 224.

[b] Cook's Second Voy. vol. i. p. 182, 183.

diſtricts

diſtricts entirely laid waſte. Moſt of the animals, plants, and herbs, which Captain Cook had left, had been deſtroyed by the ravages of war [a].

The human ſacrifices which are frequent in Otaheite, though alone ſufficient ſtrongly to fix the ſtain of barbariſm on the character of the natives, do not probably occur in ſuch conſiderable numbers as materially to affect the population of the country; and the diſeaſes, though they have been dreadfully increaſed by European contact, were before peculiarly lenient; and even for ſome time afterwards, were not marked by any extraordinary fatality [b].

The great checks to increaſe appear to be the vices of promiſcuous intercourſe, infanticide, and war, each of theſe operating with very conſiderable force. Yet powerful in the prevention and deſtruction of life as theſe cauſes muſt be, they have not always kept down the population to the level of the means of ſubſiſtence. According to Mr. Anderſon, "Notwith-
" ſtanding the extreme fertility of the iſland, a
" famine frequently happens in which it is ſaid
" many periſh. Whether this be owing to the

[a] Vancouver's Voy. vol. i. b. i. c. 6. p. 98. 4to.

[b] Cook's Third Voy. vol. ii. p. 148.

" failure

" failure of ſome ſeaſons, to over-population " which muſt ſometimes almoſt neceſſarily " happen, or wars, I have not been able to de- " termine; though the truth of the fact may " fairly be inferred from the great economy that " they obſerve with reſpect to their food, even " when there is plenty[a]." After a dinner with a chief at Ulietea, Captain Cook obſerved, that when the company roſe, many of the common people ruſhed in, to pick up the crumbs which had fallen, and for which they ſearched the leaves very narrowly. Several of them daily attended the ſhips, and aſſiſted the butchers for the ſake of the entrails of the hogs which were killed. In general little ſeemed to fall to their ſhare except offals. " It muſt be owned," Captain Cook ſays, " that they are exceedingly " careful of every kind of proviſion, and waſte " nothing that can be eaten by man, fleſh and " fiſh eſpecially[b]."

From Mr. Anderſon's account, it appears that a very ſmall portion of animal food falls to the lot of the lower claſs of people, and then it is either fiſh, ſea eggs, or other marine productions; for they ſeldom or never eat pork. The

[a] Cook's Third Voy. vol. ii. p. 153, 154.
[b] Id. Second Voy. vol. i. p. 176.

king or principal chief is alone able to furniſh this luxury every day; and the inferior chiefs, according to their riches, once a week, fortnight, or month[a]. When the hogs and fowls have been diminiſhed by wars, or too great conſumption, a prohibition is laid upon theſe articles of food, which continues in force ſometimes for ſeveral months, or even for a year or two, during which time, of courſe, they multiply very faſt, and become again plentiful[b]. The common diet even of the Eareeoies, who are among the principal people of the iſlands, is, according to Mr. Anderſon, made up of at leaſt nine tenths of vegetable food[c]. And as a diſtinction of ranks is ſo ſtrongly marked, and the lives and property of the lower claſſes of people appear to depend abſolutely on the will of their chiefs, we may well imagine that theſe chiefs will often live in plenty, while their vaſſals and ſervants are pinched with want.

From the late accounts of Otaheite in the Miſſionary Voyage, it would appear, that the depopulating cauſes above enumerated have operated with moſt extraordinary force ſince Captain Cook's laſt viſit. A rapid ſucceſſion of

[a] Cook's Third Voy. vol. ii. p. 154. [b] Id. p. 155.
[c] Id. p. 148.

deſtructive

deſtructive wars, during a part of that interval, is taken notice of in the intermediate viſit of Captain Vancouver[a]; and from the ſmall proportion of women remarked by the Miſſionaries[b], we may infer that a greater number of female infants had been deſtroyed than formerly. This ſcarcity of women would naturally increaſe the vice of promiſcuous intercourſe, and, aided by the ravages of European diſeaſes, ſtrike moſt effectually at the root of population[c].

It is probable that Captain Cook, from the data on which he founded his calculation, may have overrated the population of Otaheite, and perhaps the Miſſionaries have rated it too low[d]; but I have no doubt that the population has very conſiderably decreaſed ſince Captain Cook's viſit, from the different accounts that are given of the habits of the people with regard to economy at the different periods. Captain Cook and Mr. Anderſon agree in deſcribing their extreme carefulneſs of every kind of food; and Mr. Anderſon, apparently after a very attentive inveſtigation of the ſubject, mentions the fre-

[a] Vancouver's Voy. vol. i. b. i. c. 7. p. 137.
[b] Miſſionary Voyage, p. 192, & 385.
[c] Id. Appen. p. 347. [d] Id ch. xiii. p. 212.

quent

quent recurrence of famines. The Miſſionaries, on the contrary, though they ſtrongly notice the diſtreſs from this cauſe in the Friendly Iſlands and the Marqueſas, ſpeak of the productions of Otaheite as being in the greateſt profuſion; and obſerve, that notwithſtanding the horrible waſte committed at feaſtings, and by the Eareeoie ſociety, want is ſeldom known [a].

It would appear from theſe accounts, that the population of Otaheite is at preſent repreſſed conſiderably below the average means of ſubſiſtence, but it would be premature to conclude that it will continue long ſo. The variations in the ſtate of the iſland which were obſerved by Captain Cook, in his different viſits, appear to prove that there are marked oſcillations in its proſperity and population [b]. And this is exactly what we ſhould ſuppoſe from theory. We cannot imagine that the population of any of theſe iſlands has, for ages paſt, remained ſtationary at a fixed number, or that it can have been regularly increaſing, according to any rate, however ſlow. Great fluctuations muſt neceſſarily have taken place. Overpopulouſneſs would at all times increaſe the natural propenſity of ſavages

[a] Miſſionary Voy. p. 195. Appen. p. 385.

[b] Cook's Second Voy. vol. i. p. 182. & ſeq. & 346.

to war; and the enmities occaſioned by aggreſſions of this kind, would continue to ſpread devaſtation, long after the original inconvenience, which might have prompted them, had ceaſed to be felt[a]. The diſtreſſes experienced from one or two unfavourable ſeaſons, operating on a crowded population, which was before living with the greateſt economy, and preſſing hard againſt the limits of its food, would, in ſuch a ſtate of ſociety, occaſion the more general prevalence of infanticide and promiſcuous intercourſe[b]; and theſe depopulating cauſes would in the ſame manner continue to act with increaſed force, for ſome time after the occaſion which had aggravated them was at an end A change of habits to a certain degree, gradually produced by a change of circumſtances, would ſoon reſtore the population, which could not long be kept below its natural level without the moſt extreme violence. How far European contact may operate in Otaheite with this extreme vio-

[a] Miſſionary Voy. p. 225.

[b] I hope I may never be miſunderſtood with regard to ſome of theſe preventive cauſes of overpopulation, and be ſuppoſed to imply the ſlighteſt approbation of them, merely becauſe I relate their effects. A cauſe which may prevent any particular evil may be beyond all compariſon worſe than the evil itſelf.

lence,

lence, and prevent it from recovering its former population, is a point which experience only can determine. But ſhould this be the caſe, I have no doubt that on tracing the cauſes of it, we ſhould find them to be aggravated vice and miſery.

Of the other iſlands in the Pacific Ocean we have a leſs intimate knowledge than of Otaheite; but our information is ſufficient to aſſure us, that the ſtate of ſociety in all the principal groups of them is in moſt reſpects extremely ſimilar. Among the Friendly and Sandwich iſlanders, the ſame feudal ſyſtem and feudal turbulence, the ſame extraordinary power of the chiefs and degraded ſtate of the lower orders of ſociety, and nearly the ſame promiſcuous intercourſe among a great part of the people, have been found to prevail, as in Otaheite.

In the Friendly Iſlands, though the power of the king was ſaid to be unlimited, and the life and property of the ſubject at his diſpoſal; yet it appeared, that ſome of the other chiefs acted like petty ſovereigns, and frequently thwarted his meaſures, of which he often complained. "But however independent" (Captain Cook ſays) "on the deſpotic power of the king the "great men may be, we ſaw inſtances enough

226327B

" to prove, that the lower orders of people have " no property nor ſafety for their perſons, but " at the will of the chiefs, to whom they re- " ſpectively belong[a]." The chiefs often beat the inferior people moſt unmercifully[b], and when any of them were caught in a theft on board the ſhips, their maſters, far from interceding for them, would often adviſe the killing of them[c], which, as the chiefs themſelves appeared to have no great horror of the crime of theft, could only ariſe from their conſidering the lives of theſe poor people as of little or no value.

Captain Cook, in his firſt viſit to the Sandwich Iſlands, had reaſon to think that external wars and internal commotions were extremely frequent among the natives[d]. And Captain Vancouver, in his later account, ſtrongly notices the dreadful devaſtations in many of the iſlands from theſe cauſes. Inceſſant contentions had occaſioned alterations in the different governments ſince Captain Cook's viſit. Only one chief of all that were known at that time was living; and, on inquiry, it appeared that few had died a natural death, moſt of them having

[a] Cook's Third Voy. vol. i. p. 406. [b] p. 232.
[c] p. 233.. [d] Id. vol. ii. p. 247.

been

been killed in theſe unhappy conteſts[a]. The power of the chiefs over the inferior claſſes of the people in the Sandwich Iſlands appears to be abſolute. The people, on the other hand, pay them the moſt implicit obedience; and this ſtate of ſervility has manifeſtly a great effect in debaſing both their minds and bodies[b]. The gradations of rank ſeem to be even more ſtrongly marked here than in the other iſlands, as the chiefs of higher rank behave to thoſe who are lower in this ſcale in the moſt haughty and oppreſſive manner[c].

It is not known that either in the Friendly or Sandwich Iſlands infanticide is practiſed, or that inſtitutions are eſtabliſhed ſimilar to the Eareeoie ſocieties in Otaheite; but it ſeems to be ſtated on unqueſtionable authority, that proſtitution is extenſively diffuſed, and prevails to a great degree among the lower claſſes of women[d], which muſt always operate as a moſt powerful check to population. It ſeems highly probable, that the toutous, or ſervants, who ſpend the greateſt part of their time in attendance upon

[a] Vancouver, vol. i. b. ii. c. ii. p. 187, 188. [b] Cook's Third Voyage, vol. iii. p. 157. [c] Ibid. [d] Cook's Third Voy. vol. i. p. 401. Vol. ii. p 543. Vol. iii. p. 130. Miſſionary Voy. p. 270.

the chiefs[a], do not often marry; and it is evident that the polygamy allowed to the ſuperior people muſt tend greatly to encourage and aggravate the vice of promiſcuous intercourſe among the inferior claſſes.

Were it an eſtabliſhed fact, that in the more fertile iſlands of the Pacific Ocean very little or nothing was ſuffered from poverty and want of food; as we could not expect to find among ſavages in ſuch climates any great degree of virtuous reſtraint, the theory on the ſubject would naturally lead us to conclude, that vice including war was the principal check to their population. The accounts which we have of theſe iſlands ſtrongly confirm this concluſion. In the three great groups of iſlands which have been noticed, vice appears to be a moſt prominent feature. In Eaſter Iſland, from the great diſproportion of the males to the females[b], it can ſcarcely be doubted that infanticide prevails, though the fact may not have come to the knowledge of any of our navigators. Pérouſe ſeemed to think that the women in each diſtrict were common property to the men of that diſtrict[c], though the

[a] Cook's Third Voy. vol. i. p. 394. [b] Cook's Second Voy. vol. i. p. 289. Voyage de Pérouſe, c. iv. p. 323. c. v. p. 336. 4to. 1794. [c] Pérouſe, c. iv. p. 326. c. v. p. 336.

numbers

numbers of children which he ſaw[a] would rather tend to contradict this opinion. The fluctuations in the population of Eaſter Iſland appear to have been very conſiderable ſince its firſt diſcovery by Roggewein in 1722, though it cannot have been much affected by European intercourſe. From the deſcription of Perouſe it appeared, at the time of his viſit, to be recovering its population, which had been in a very low ſtate, probably either from drought, civil diſſenſions, or the prevalence in an extreme degree of infanticide and promiſcuous intercourſe. When Captain Cook viſited it in his ſecond voyage, he calculated the population at ſix or ſeven hundred[b], Pérouſe at two thouſand[c]; and, from the number of children which he obſerved, and the number of new houſes that were building, he conceived that the population was on the increaſe[d].

In the Marianne Iſlands, according to Pere Gobien, a very great number[e] of the young men remained unmarried, lived like the members of the Eareeoie ſociety in Otaheite, and

[a] Pérouſe, c. v. p. 335. [b] Cook's Second Voy. vol. i. p. 289. [c] Pérouſe, c. v. p. 336. [d] Ibid. [e] Une infinité de jeunes gens. Hiſt. des Navigations aux terres Auſtrales, vol. ii. p. 507.

were diſtinguiſhed by a ſimilar name[a]. In the iſland of Formoſa, it is ſaid that the women were not allowed to bring children into the world before the age of thirty five. If they were with child prior to that period, an abortion was effected by the prieſteſs, and till the huſband was forty years of age, the wife continued to live in her father's houſe, and was only ſeen by ſtealth[b].

The tranſient viſits that have been made to ſome other iſlands, and the imperfect accounts

[a] Cook's Third Voyage, vol. ii. p. 158, note of the Editor.

[b] Harris's Collection of Voyages, 2 vols. folio. edit. 1744. vol i. p. 794. This relation is given by John Albert de Mandeſloe, a German traveller of ſome reputation for fidelity, though I believe, in this inſtance, he takes his accounts from the Dutch writers quoted by Monteſquieu, (Eſprit des Loix liv. 23. ch. 17.) The authority is not perhaps ſufficient to eſtabliſh the exiſtence of ſo ſtrange a cuſtom, though I confeſs that it does not appear to me wholly improbable. In the ſame account it is mentioned, that there is no difference of condition among theſe people, and that their wars are ſo bloodleſs, that the death of a ſingle perſon generally decides them. In a very healthy climate, where the habits of the people were favourable to population, and a community of goods was eſtabliſhed, as no individual would have reaſon to fear *particular poverty* from a large family, the government would be in a manner compelled to take upon itſelf the ſuppreſſion of the population by law; and as this would be the greateſt violation of every natural feeling, there cannot be a more forcible argument againſt a community of goods.

that

that we have of them, do not enable us to enter into any particular detail of their cuſtoms; but from the general ſimilarity of theſe cuſtoms, as far as has been obſerved, we have reaſon to think that though they may not be marked by ſome of the more atrocious peculiarities which have been mentioned, vicious habits with reſpect to women, and wars, are the principal checks to their population.

Theſe however are not all. On the ſubject of the happy ſtate of plenty in which the natives of the South Sea iſlands have been ſaid to live, I am inclined to think that our imaginations have been carried beyond the truth, by the exuberant deſcriptions which have ſometimes been given of theſe delightful ſpots. The not unfrequent preſſure of want, even in Otaheite, mentioned in Captain Cook's laſt voyage, has undeceived us with regard to the moſt fertile of all theſe iſlands; and from the Miſſionary Voyage it appears, that at certain times of the year, when the bread fruit is out of ſeaſon, all ſuffer a temporary ſcarcity. At Oheitahoo, one of the Marqueſas, it amounted to hunger, and the very animals were pinched for want of food. At Tongataboo, the principal of the Friendly Iſlands, the chiefs to ſecure plenty

changed

changed their abodes to other iſlands [a], and at times many of the natives ſuffered much from want [b]. In the Sandwich Iſlands long droughts ſometimes occur [c], hogs and yams are often very ſcarce [d], and viſitors are received with an unwelcome auſterity very different from the profuſe benevolence of Otaheite. In new Caledonia the inhabitants feed upon ſpiders [e], and are ſometimes reduced to eat great pieces of ſteatite to appeaſe the cravings of their hunger [f].

Theſe facts ſtrongly prove, that in whatever abundance the productions of theſe iſlands may be found at certain periods, or however they may be checked by ignorance, wars, and other cauſes, the average population, generally ſpeaking, preſſes hard againſt the limits of the average food. In a ſtate of ſociety, where the lives of the inferior orders of the people ſeem to be conſidered by their ſuperiors as of little or no value, it is evident that we are very liable to be deceived with regard to the appearances of abundance; and we may eaſily conceive that hogs and vegetables might be exchanged in great

[a] Miſſionary Voy. Appen. p. 385. [b] Id. p. 270. [c] Vancouver's Voy. vol. ii. b. iii. c. viii. p. 230. [d] Id. c. vii. and viii.

[e] Voyage in ſearch of Péroufe, ch. xiii. p. 420. Eng. tranſl. 4to. [f] Id. ch. xiii. p. 400.

profuſion

profuſion for European commodities by the principal proprietors, while their vaſſals and ſlaves were ſuffering ſeverely from want.

I cannot conclude this general review of that department of human ſociety, which has been claſſed under the name of ſavage life, without obſerving, that the only advantage in it above civilized life that I can diſcover, is the poſſeſſion of a greater degree of leiſure by the maſs of the people. There is leſs work to be done, and conſequently there is leſs labour. When we conſider the inceſſant toil to which the lower claſſes of ſociety in civilized life are condemned, this cannot but appear to us a ſtriking advantage; but it is probably overbalanced by greater diſadvantages. In all thoſe countries where proviſions are procured with facility, a moſt tyrannical diſtinction of rank prevails. Blows and violations of property ſeem to be matters of courſe; and the lower claſſes of the people are in a ſtate of comparative degradation much below what is known in civilized nations.

In that part of ſavage life where a great degree of equality obtains, the difficulty of procuring food, and the hardſhips of inceſſant war, create a degree of labour not inferior to that which is exerted by the lower claſſes of the people

people in civilized ſociety, though much more unequally divided. But though we may compare the labour of theſe two claſſes of human ſociety, their privations and ſufferings will admit of no compariſon. Nothing appears to me to place this in ſo ſtriking a point of view, as the whole tenor of education among the ruder tribes of ſavages in America. Every thing that can contribute to teach the moſt unmoved patience under the ſevereſt pains and misfortunes, every thing that tends to harden the heart, and narrow all the ſources of ſympathy, is moſt ſedulouſly inculcated on the ſavage. The civilized man, on the contrary, though he may be adviſed to bear evil with patience when it comes, is not inſtructed to be always expecting it. Other virtues are to be called into action beſides fortitude. He is taught to feel for his neighbour, or even his enemy in diſtreſs; to encourage and expand his ſocial affections; and in general, to enlarge the ſphere of pleaſurable emotions. The obvious inference from theſe two different modes of education is, that the civilized man hopes to enjoy, the ſavage expects only to ſuffer.

The prepoſterous ſyſtem of Spartan diſcipline, and that unnatural abſorption of every private

ſeeling

feeling in concern for the public, which has ſometimes been ſo abſurdly admired, could never have exiſted but among a people expoſed to perpetual hardſhips and privations from inceſſant war, and in a ſtate under the conſtant fear of dreadful reverſes of fortune. Inſtead of conſidering theſe phenomena as indicating any peculiar tendency to fortitude and patriotiſm in the diſpoſition of the Spartans, I ſhould merely conſider them as a ſtrong indication of the miſerable and almoſt ſavage ſtate of Sparta, and of Greece in general at that time. Like the commodities in a market, thoſe virtues will be produced in the greateſt quantity, for which there is the greateſt demand; and where patience under pain and privations, and extravagant patriotic ſacrifices, are the moſt called for, it is a melancholy indication of the miſery of the people, and the inſecurity of the ſtate.

CHAP.

CHAP. VI

Of the Checks to Population among the ancient Inhabitants of the North of Europe.

A HISTORY of the early migrations and ſettlements of mankind, with the motives which prompted them, would illuſtrate in a ſtriking manner the conſtant tendency in the human race to increaſe beyond the means of ſubſiſtence. Without ſome general law of this nature, it would ſeem as if the world could never have been peopled. A ſtate of ſloth, and not of reſtleſſneſs and activity, ſeems evidently to be the natural ſtate of man; and this latter diſpoſition could not have been generated but by the ſtrong goad of neceſſity, though it might afterwards be continued by habit, and the new aſſociations that were formed from it, the ſpirit of enterpriſe, and the thirſt of martial glory.

We are told that Abram and Lot had ſo great ſubſtance in cattle, that the land would not bear them both, that they might dwell together. There was ſtrife between their herdſmen. And Abram propoſed to Lot to ſeparate, and ſaid,

" Is

"Is not the whole land before thee? If thou "wilt take the left hand, then I will go to the "right; if thou depart to the right hand, then "I will go to the left[a]."

This ſimple obſervation and propoſal is a ſtriking illuſtration of that great ſpring of action which overſpread the whole earth with people; and in the progreſs of time, drove ſome of the leſs fortunate inhabitants of the globe, yielding to irreſiſtible preſſure, to ſeek a ſcanty ſubſiſtence in the burning deſerts of Aſia and Africa, and the frozen regions of Siberia and North America. The firſt migrations would naturally find no other obſtacles than the nature of the country; but when a conſiderable part of the earth had been peopled, though but thinly, the poſſeſſors of theſe diſtricts would not yield them to others without a ſtruggle; and the redundant inhabitants of any of the more central ſpots could not find room for themſelves without expelling their neareſt neighbours, or at leaſt paſſing through their territories, which would neceſſarily give occaſion to frequent conteſts.

The middle latitudes of Europe and Aſia ſeem to have been occupied at an early period

[a] Geneſis, ch. xiii.

of

of hiſtory by nations of ſhepherds. Thucydides gave it as his opinion, that the civilized ſtates of Europe and Aſia, in his time, could not reſiſt the Scythians united. Yet a country in paſture cannot poſſibly ſupport ſo many inhabitants as a country in tillage; but what renders nations of ſhepherds ſo formidable, is the power which they poſſeſs of moving all together, and the neceſſity they frequently feel of exerting this power in ſearch of freſh paſture for their herds. A tribe that is rich in cattle has an immediate plenty of food. Even the parent ſtock may be devoured in caſe of abſolute neceſſity. The women live in greater eaſe than among nations of hunters, and are conſequently more prolific. The men, bold in their united ſtrength, and confiding in their power of procuring paſture for their cattle by change of place, feel probably but few fears about providing for a family. Theſe combined cauſes ſoon produce their natural and invariable effect, an extended population. A more frequent and rapid change of place then becomes neceſſary. A wider and more extenſive territory is ſucceſſively occupied. A broader deſolation extends all around them. Want pinches the leſs fortunate members of the ſociety; and at length the impoſſibility of ſupporting

porting ſuch a number together becomes too evident to be reſiſted. Young ſcions are then puſhed out from the parent ſtock, and inſtructed to explore freſh regions, and to gain happier ſeats for themſelves by their ſwords.

"The world is all before them where to chooſe."

Reſtleſs from preſent diſtreſs, fluſhed with the hope of fairer proſpects, and animated with the ſpirit of hardy enterpriſe, theſe daring adventurers are likely to become formidable adverſaries to all who oppoſe them. The inhabitants of countries long ſettled, engaged in the peaceful occupations of trade and agriculture, would not often be able to reſiſt the energy of men acting under ſuch powerful motives of exertion. And the frequent conteſts with tribes in the ſame circumſtances with themſelves, would be ſo many ſtruggles for exiſtence, and would be fought with a deſperate courage, inſpired by the reflection, that death would be the puniſhment of defeat, and life the prize of victory.

In theſe ſavage conteſts, many tribes muſt have been utterly exterminated. Many probably periſhed by hardſhips and famine. Others, whoſe leading ſtar had given them a happier direction, became great and powerful tribes, and

in their turn ſent off freſh adventurers in ſearch of other ſeats. Theſe would at firſt owe allegiance to their parent tribe; but in a ſhort time the ties that bound them would be little felt, and they would remain friends, or become enemies, according as their power, their ambition, or their convenience, might dictate.

The prodigious waſte of human life, occaſioned by this perpetual ſtruggle for room and food, would be more than ſupplied by the mighty power of population, acting in ſome degree unſhackled from the conſtant habit of migration. A prevailing hope of bettering their condition by change of place, a conſtant expectation of plunder, a power even, if diſtreſſed, of ſelling their children as ſlaves, added to the natural careleſſneſs of the barbaric character, would all conſpire to raiſe a population, which would remain to be repreſſed afterwards by famine or war.

The tribes that poſſeſſed themſelves of the more fruitful regions, though they might win them and maintain them by continual battles, rapidly increaſed in number and power, from the increaſed means of ſubſiſtence; till at length the whole territory, from the confines of China to the ſhores of the Baltic, was peopled by a various

various race of barbarians, brave, robuſt, and enterpriſing, inured to hardſhips, and delighting in war[a]. While the different fixed governments of Europe and Aſia, by ſuperior population and ſuperior ſkill, were able to oppoſe an impenetrable barrier to their deſtroying hordes, they waſted their ſuperfluous numbers in conteſts with each other; but the moment that the weakneſs of the ſettled governments, or the caſual union of many of theſe wandering tribes, gave them the aſcendant in power, the ſtorm diſcharged itſelf on the faireſt provinces of the earth; and China, Perſia, Egypt, and Italy, were overwhelmed at different periods in this flood of barbariſm. Theſe remarks are ſtrongly exemplified in the fall of the Roman empire. The ſhepherds of the north of Europe were long held in check by the vigour of the Roman arms, and the terror of the Roman name. The for-

[a] The various branchings, diviſions, and conteſts of the great Tartar nation are curiouſly deſcribed in the genealogical hiſtory of the Tartars by the Khan Abul Ghazi; (tranſlated into Engliſh from the French, with additions, in 2 vols. 8vo.) but the misfortune of all hiſtory is, that while the motives of a few princes and leaders, in their various projects of ambition, are ſometimes detailed with accuracy, the motives which often crowd their ſtandards with willing followers are totally overlooked.

midable irruption of the Cimbri in ſearch of new ſettlements, though ſignalized by the deſtruction of five conſular armies, was at length arreſted in its victorious career by Marius; and the barbarians were taught to repent their raſhneſs by the almoſt complete extermination of this powerful colony[a]. The names of Julius Cæſar, of Druſus, Tiberius, and Germanicus, impreſſed on their minds by the ſlaughter of their countrymen, continued to inſpire them with a fear of encroaching on the Roman territory. But they were rather triumphed over, than vanquiſhed[b]; and though the armies or colonies which they ſent forth were either cut off or forced back into their original ſeats, the vigour of the great German nation remained unimpaired, and ready to pour forth her hardy ſons in conſtant ſucceſſion, wherever they could force an opening for themſelves by their ſwords. The feeble reigns of Decius, Gallus, Æmilianus, Valerian, and Gallienus, afforded ſuch an opening, and were in conſequence marked by a general irruption of barbarians. The Goths, who were ſuppoſed to have migrated in the courſe of ſome years from Scandinavia to the Euxine, were bribed to withdraw their victorious troops

[a] Tacitus de Moribus Germanorum, ſ. 37. [b] Id.

by

by an annual tribute. But no ſooner was the dangerous ſecret of the wealth and weakneſs of the Roman empire thus revealed to the world, than new ſwarms of barbarians ſpread devaſtation through the frontier provinces, and terror as far as the gates of Rome[a]. The Franks, the Allemanni, the Goths, and adventurers of leſs conſiderable tribes comprehended under theſe general appellations, poured like a torrent on different parts of the empire. Rapine and oppreſſion deſtroyed the produce of the preſent and the hope of future harveſts. A long and general famine was followed by a waſting plague, which for fifteen years ravaged every city and province of the Roman empire; and, judging from the mortality in ſome ſpots, it was conjectured, that in a few years, war, peſtilence, and famine, had conſumed the moiety of the human ſpecies[b]. Yet the tide of emigration ſtill continued at intervals to roll impetuouſly from the north, and the ſucceſſion of martial princes, who repaired the misfortunes of their predeceſſors, and propped the falling fate of the empire, had to accompliſh the labours of Hercules in freeing the Roman

[a] Gibbon's Decline and Fall of the Roman Empire, vol. i. c. x. p. 407. et ſeq. 8vo. Edit. 1783.

[b] Id. vol. i. c. x. p. 455, 456.

territory from theſe barbarous invaders. The Goths, who, in the year 250 and the following years, ravaged the empire both by ſea and land with various ſucceſs, but in the end with the almoſt total loſs of their adventurous bands[a], in the year 269 ſent out an emigration of immenſe numbers with their wives and families for the purpoſes of ſettlement[b]. This formidable body, which was ſaid to conſiſt at firſt of 320,000 barbarians[c], was ultimately deſtroyed and diſperſed by the vigour and wiſdom of the emperor Claudius. His ſucceſſor, Aurelian, encountered and vanquiſhed new hoſts of the ſame name that had quitted their ſettlements in the Ukraine; but one of the implied conditions of the peace was, that he ſhould withdraw the Roman forces from Dacia, and relinquiſh this great province to the Goths and Vandals[d]. A new and moſt formidable invaſion of the Allemanni threatened ſoon after to ſack the miſtreſs of the world, and three great and bloody battles were fought by Aurelian before this deſtroying hoſt could be exterminated, and Italy be delivered from its ravages[e].

The ſtrength of Aurelian had cruſhed on

[a] Gibbon, vol. i. c. x. p. 431. [b] Id. vol. ii. c. xi. p. 13. [c] Id. p. 11. [d] Id. p. 19. A. D. 270. [e] Id. p. 26.

every

every ſide the enemies of Rome. After his death they ſeemed to revive with an increaſe of fury and numbers. They were again vanquiſhed on all ſides by the active vigour of Probus. The deliverance of Gaul alone from German invaders is reported to have coſt the lives of four hundred thouſand barbarians[a]. The victorious emperor purſued his ſucceſſes into Germany itſelf, and the princes of the country, aſtoniſhed at his preſence, and diſmayed and exhauſted by the ill ſucceſs of their laſt emigration, ſubmitted to any terms that the conquerors might impoſe[b]. Probus, and afterwards Diocletian[c], adopted the plan of recruiting the exhauſted provinces of the empire by granting lands to the fugitive or captive barbarians, and diſpoſing of their ſuperfluous numbers where they might be the leaſt likely to be dangerous to the ſtate; but ſuch colonizations were an inſufficient vent for the population of the north, and the ardent temper of the barbarians would not always bend to the ſlow labours of agriculture[d]. During the vigorous reign of Diocletian, unable to make an effectual impreſſion on the Roman frontiers, the Goths, the Vandals, the Gepidæ, the Burgun-

[a] Gibbon, vol. ii. c. xii. p. 75. [b] Id. p. 79, A. D. 277.
[c] Id. c. xiii. p. 132. A. D. 296. [d] Id. vol. ii. c. xii. p. 84.

dians, and the Allemanni, waſted each other's ſtrength by mutual hoſtilities, while the ſubjects of the empire enjoyed the bloody ſpectacle, conſcious, that whoever vanquiſhed, they vanquiſhed the enemies of Rome[a].

Under the reign of Conſtantine the Goths were again formidable. Their ſtrength had been reſtored by a long peace, and a new generation had ariſen, which no longer remembered the misfortunes of ancient days[b]. In two ſucceſſive wars great numbers of them were ſlain. Vanquiſhed on every ſide, they were driven into the mountains; and, in the courſe of a ſevere campaign, above a hundred thouſand were computed to have periſhed by cold and hunger[c]. Conſtantine adopted the plan of Probus and his ſucceſſors, in granting lands to thoſe ſuppliant barbarians who were expelled from their own country. Towards the end of his reign, a competent portion in the provinces of Pannonia, Thrace, Macedonia, and Italy, was aſſigned for the habitation and ſubſiſtence of three hundred thouſand Sarmatians[d].

The warlike Julian had to encounter and

[a] Gibbon, vol. ii, c. xiii. p. 130. [b] Id. c. xiv. p. 254. A. D. 322. [c] Id. vol. iii. c. xviii. p. 125. A. D. 332. [d] Id. p. 127.

vanquiſh

vanquiſh new ſwarms of Franks and Allemanni, that, emigrating from their German foreſts during the civil wars of Conſtantine, ſettled in different parts of Gaul, and made the ſcene of their devaſtations three times more extenſive than that of their conqueſts [a]. Deſtroyed and repulſed on every ſide, they were purſued in five expeditions into their own country [b]; but Julian had conquered, as ſoon as he had penetrated into Germany; and in the midſt of that mighty hive which had ſent out ſuch ſwarms of people as to keep the Roman world in perpetual dread, the principal obſtacles to his progreſs were almoſt impaſſable roads and vaſt unpeopled foreſts [c].

Though thus ſubdued and proſtrated by the victorious arms of Julian, this hydra-headed monſter roſe again after a few years; and the firmneſs, vigilance, and powerful genius of Valentinian were fully called into action, in protecting his dominions from the different irruptions of the Allemanni, the Burgundians, the Saxons, the Goths, the Quadi, and the Sarmatians [d].

[a] Gibbon vol. iii. c. xix. p. 215. A. D. 356.
[b] Id. p. 228. and vol. iv. c. xxii. p. 17. from A. D. 357 to 359.
[c] Id. vol iv. c. xxii. p. 17. and vol. iii. c. xix. p. 229.
[d] Id vol. iv. c. xxv. from A. D. 364 to 375.

The

The fate of Rome was at length determined by an irreſiſtible emigration of the Huns from the eaſt and north, which precipitated on the empire the whole body of the Goths [a]; and the continuance of this powerful preſſure on the nations of Germany ſeemed to prompt them to the reſolution of abandoning to the fugitives of Sarmatia their woods and moraſſes, or at leaſt of diſcharging their ſuperfluous numbers on the provinces of the Roman empire [b]. An emigration of four hundred thouſand perſons iſſued from the ſame coaſt of the Baltic, which had poured forth the myriads of Cimbri and Teutones during the vigour of the Republic [c]. When this hoſt was deſtroyed by war and famine, other adventurers ſucceeded. The Suevi, the Vandals, the Alani, the Burgundians, paſſed the Rhine never more to retreat [d]. The conquerors who firſt ſettled were compelled or exterminated by new invaders. Clouds of barbarians ſeemed to collect from all parts of the northern hemiſphere. Gathering freſh darkneſs and terror as they rolled on, the congregated bodies at length obſcured the ſun of Italy, and ſunk the weſtern world in night.

[a] Gibbon, vol. iv. c. xxvi. p. 382. et ſeq. A. D. 376.
[b] Id. vol. v. c. xxx. p. 213. [c] Id. p. 214. A. D. 406.
[d] Id. p. 224.

In

In two centuries from the flight of the Goths acroſs the Danube, barbarians of various names and lineage had plundered and taken poſſeſſion of Thrace, Pannonia, Gaul, Britain, Spain, Africa, and Italy[a]. The moſt horrible devaſtations, and an incredible deſtruction of the human ſpecies, accompanied theſe rapid conqueſts; and famine and peſtilence, which always march in the train of war, when it ravages with ſuch inconſiderate cruelty, raged in every part of Europe. The hiſtorians of the times, who beheld theſe ſcenes of deſolation, labour and are at a loſs for expreſſions to deſcribe them; but beyond the power of language, the numbers and the deſtructive violence of theſe barbarous invaders were evinced by the total change which took place in the ſtate of Europe[b]. Theſe tremendous effects, ſo long and ſo deeply felt throughout the faireſt portions of the earth, may be traced to the ſimple cauſe of the ſuperiority of the power of population to the means of ſubſiſtence.

Machiavel, in the beginning of his hiſtory of Florence, ſays, "The people who inhabit the "northern parts that lie between the Rhine

[a] Robertſon's Charles V. vol. i. ſect. i. p. 7. 8vo. 1782.

[b] Id. p. 10, 11, 12.

"and

" and the Danube, living in a healthful and " prolific climate, often increaſe to ſuch de- " gree, that vaſt numbers of them are forced to " leave their native country, and go in ſearch " of new habitations. When any of thoſe pro- " vinces begins to grow too populous, and wants " to diſburden itſelf, the following method is " obſerved. In the firſt place, it is divided into " three parts, in each of which there is an equal " portion of the nobility and commonalty, the " rich and the poor. After this they caſt lots, and " that diviſion on which the lot falls, quits the " country and goes to ſeek its fortune, leaving " the other two more room and liberty to en- " joy their poſſeſſions at home. Theſe emi- " grations proved the deſtruction of the Roman " empire[a]. Gibbon is of opinion that Ma- chiavel has repreſented theſe emigrations too much as regular and concerted meaſures[b]; but I think

[a] Iſtorie Fiorentine Machiavelli, l. i. p. 1, 2.

[b] Gibbon, vol. i. c. ix. p. 360. note. Paul Diaconus, from whom it is ſuppoſed that Machiavel has taken this deſcription, writes thus: Septentrionalis plaga quantò magis ab æſtu ſolis remota eſt, et nivali frigore gelida, tantò ſalubrior corporibus hominum et propagandis gentibus magis coaptata. Sicut e contrario, omnis meridiana regio, quò ſolis eſt fervori vicinior eo morbis eſt abundantior, et educandis minus apta mortalibus**.

Multæque

I think it highly probable that he has not erred much in this reſpect, and that it was a foreſight of the frequent neceſſity of thus diſcharging their redundant population which gave occaſion to that law among the Germans, taken notice of by Cæſar and Tacitus, of not permitting their cultivated lands to remain longer than a year under the ſame poſſeſſors[a]. The reaſons which Cæſar mentions as being aſſigned for this cuſtom ſeem to be hardly adequate; but if we add to them the proſpect of emigration, in the manner deſcribed by Machiavel, the cuſtom will appear to be highly uſeful, and a double weight will be given to one of the reaſons that Cæſar

Multæque quoque ex eâ, eo quod tantas mortalium turmas germinat, quantas alere vix ſufficit, ſæpe gentes egreſſæ ſunt, quæ non ſolum partes Aſiæ, ſed etiam maxime ſibi contiguam Europam afflixere. (De geſtis Longobardorum, l. i. c. i.)

Intra hanc ergo conſtituti populi, dum in tantam multitudinem pullulaſſent, ut jam ſimul habitare non valerent, in tres (ut fertur) partes omnem catervam dividentes, quænam ex illis patriam eſſet relicturа, ut novas ſedes exquirerent, ſorte diſquirunt. Igitur ea pars, cui ſors dederit genitale ſolum excedere, exteraque arva ſectari, conſtituti ſupra ſe duobus ducibus, Ibore ſcilicet et Agione, qui et Germani erant, et juvenili ætate floridi, ceteriſque præſtantiores, ad exquirandas quas poſſint incolere terras, ſedeſque ſtatuere, valedicentes ſuis ſimul et patriæ iter arripiunt. (c. ii.)

[a] De bello Gallico, vi. 22. De moribus German. ſ. xxvi.

mentions,

mentions, namely leſt they ſhould be led, by being accuſtomed to one ſpot, to exchange the toils of war for the buſineſs of agriculture[a].

Gibbon very juſtly rejects, with Hume and Robertſon, the improbable ſuppoſition that the inhabitants of the north were far more numerous formerly than at preſent[b]; but he thinks himſelf obliged at the ſame time to deny the ſtrong tendency to increaſe in the northern nations[c], as if the two facts were neceſſarily connected. But a careful diſtinction ſhould always be made, between a redundant population and a population actually great. The Highlands of Scotland are probably more redundant in population than any other part of Great Britain; and though it would be admitting a palpable abſurdity, to allow that the north of Europe, covered in early ages with immenſe foreſts, and inhabited by a race of people who ſupported themſelves principally by their herds and flocks[d], was more populous in thoſe times than in its preſent ſtate; yet the facts detailed in the Decline and Fall of the Roman empire, or even the very ſlight ſketch of them that I have given, cannot ra-

[a] De bello Gallico, vi. 22. [b] Gibbon vol. i. c. ix. p. 361.
[c] Id. p. 348. [d] Tacitus de moribus German. ſ. v. Cæſar de bell. Gall. vi. 22.

tionally

tionally be accounted for, without the ſuppoſition of a moſt powerful tendency in theſe people to increaſe, and to repair their repeated loſſes by the prolific power of nature.

From the firſt irruption of the Cimbri, to the final extinction of the weſtern empire, the efforts of the German nations to colonize or plunder were unceaſing[a]. The numbers that were cut off during this period by war and famine were almoſt incalculable, and ſuch as could not poſſibly have been ſupported with undiminiſhed vigour by a country thinly peopled, unleſs the ſtream had been ſupplied by a ſpring of very extraordinary power.

Gibbon deſcribes the labours of Valentinian in ſecuring the Gallic frontier againſt the Germans, an enemy, he ſays, whoſe ſtrength was renewed by a ſtream of daring volunteers which inceſſantly flowed from the moſt diſtant tribes of the north[b]. An eaſy adoption of ſtrangers was probably a mode by which ſome of the German nations renewed their ſtrength ſo ſuddenly[c], after the moſt deſtructive defeats; but

[a] Cæſar found in Gaul a moſt formidable colony under Arioviſtus, and a general dread prevailing that in a few years all the Germans would paſs the Rhine. De bell. Gall. i. 31.

[b] Gibbon, vol. iv. c. xxv. p. 283. [c] Ibid. note.

this

this explanation only removes the difficulty a little further off. It makes the earth reſt upon the tortoiſe; but does not tell us on what the tortoiſe reſts. We may ſtill aſk what northern reſervoir ſupplied this inceſſant ſtream of daring adventurers? Monteſquieu's ſolution of the problem will, I think, hardly be admitted. The ſwarms of barbarians which iſſued formerly from the north, appear no more, he ſays, at preſent; and the reaſon which he gives is, that the violences of the Romans had driven the people of the ſouth into the north. As long as this force continued they remained there; but as ſoon as it was weakned they ſpread themſelves again over every country.

The ſame phenomenon appeared after the conqueſts and tyrannies of Charlemagne, and the ſubſequent diſſolution of his empire; and if a prince, he ſays, in the preſent days were to make ſimilar ravages in Europe, the nations driven into the north, and reſting on the limits of the univerſe[a], would there make a ſtand till the moment when they would inundate or conquer Europe a third time. In a note he obſerves, we ſee to what the famous queſtion is

[a] Les nations adoſſées au limites de l'univers y tiendroient ferme. Grandeur et Décad. des Rom. c. xvi. p. 187.

reduced—

reduced—why the north is no longer ſo fully peopled as in former times?

If the famous queſtion, or rather the anſwer to it, be reduced to this, it is reduced to a miracle; for without ſome ſupernatural mode of obtaining food, how theſe collected nations could ſupport themſelves in ſuch barren regions for ſo long a period as during the vigour of the Roman empire, it is a little difficult to conceive; and one can hardly help ſmiling at the bold figure of theſe prodigious crowds making their laſt determined ſtand on the limits of the univerſe, and living, as we muſt ſuppoſe, with the moſt patient fortitude on air and ice, for ſome hundreds of years, till they could return to their own homes, and reſume their uſual more ſubſtantial mode of ſubſiſtence.

The whole difficulty, however, is at once removed, if we apply to the German nations at that time a fact which is ſo generally known to have occurred in America, and ſuppoſe, that, when not checked by wars and famine, they increaſed at a rate that would double their numbers in twenty-five or thirty years. The propriety, and even the neceſſity, of applying this rate of increaſe to the inhabitants of ancient Germany will ſtrikingly appear from that moſt

valuable picture of their manners which has been left us by Tacitus. He deſcribes them as not inhabiting cities, or even admitting of contiguous ſettlements. Every perſon ſurrounds his houſe with a vacant ſpace[a], a circumſtance, which beſides its beneficial effect as a ſecurity from fire, is ſtrongly calculated to prevent the generation, and check the ravages of epidemics. They content themſelves almoſt univerſally with one wife. Their matrimonial bond is ſtrict and ſevere, and their manners in this reſpect deſerving of the higheſt praiſe[b]. They live in a ſtate of well-guarded chaſtity, corrupted by no ſeducing ſpectacles or convivial incitements. Adultery is extremely rare, and no indulgence is ſhown to a proſtitute. Neither beauty, youth, nor riches, can procure her a huſband; for none there looks on vice with a ſmile, or calls mutual ſeduction the way of the world. To limit the increaſe of children, or put to death any of the huſband's blood, is accounted infamous; and virtuous manners have there more efficacy than good laws elſewhere[c]. Every mother ſuckles her own children, and does not deliver them into the hands of ſervants and nurſes. The

[a] Tacitus de moribus Germ. ſ. xvi. [b] Id. ſ. xviii.
[c] Id. ſ. xix.

youths

youths partake late of the ſexual intercourſe, and hence paſs the age of puberty unexhauſted. Nor are the virgins brought forward. The ſame maturity, the ſame full growth is required: the ſexes unite equally matched and robuſt, and the children inherit the vigour of their parents. The more numerous are a man's kinſmen and relations, the more comfortable is his old age; nor is it any advantage to be childleſs.[a]

With theſe manners, and a habit of enterpriſe and emigration, which would naturally remove all fears about providing for a family, it is difficult to conceive a ſociety with a ſtronger principle of increaſe in it; and we ſee at once that prolific ſource of ſucceſſive armies and colonies againſt which the force of the Roman empire ſo long ſtruggled with difficulty, and under which it ultimately ſunk. It is not probable that for two periods together, or even for one, the population within the confines of Germany ever doubled itſelf in twenty-five years. Their perpetual wars, the rude ſtate of agriculture, and particularly the very ſtrange cuſtom adopted by moſt of the tribes of marking their barriers by extenſive deſerts[b], would

[a] Tacitus de moribus Germ. ſ. xx.

[b] Cæſar de bell. Gall. vi. 23.

prevent any very great actual increaſe of numbers. At no one period could the country be called well-peopled, though it was often redundant in population. They abandoned their immenſe foreſts to the exerciſe of hunting, employed in paſturage the moſt conſiderable part of their lands, beſtowed on the ſmall remainder a rude and careleſs cultivation, and when the return of famine ſeverely admoniſhed them of the inſufficiency of their ſcanty reſources, they accuſed the ſterility of a country which refuſed to ſupply the multitude of its inhabitants[a]; but inſtead of clearing their foreſts, draining their ſwamps, and rendering their ſoil fit to ſupport an extended population, they found it more congenial to their martial habits and impatient diſpoſitions, to go "in queſt of food, of plunder, "or of glory,"[b] into other countries. Theſe adventurers either gained lands for themſelves by their ſwords, or were cut off by the various accidents of war; were received into the Roman armies, or diſperſed over the Roman territory; or perhaps, having relieved their country by their abſence, returned home laden with ſpoils, and ready, after having recruited

[a] Gibbon. vol i. c. ix. p. 360. [b] Id. c. x. p. 417.

their

their diminiſhed numbers, for freſh expeditions. The ſucceſſion of human beings appears to have been moſt rapid, and as faſt as ſome were diſpoſed of in colonies, or mowed down by the ſcythe of war and famine, others roſe in increaſed numbers to ſupply their place.

According to this view of the ſubject, the North could never have been exhauſted; and when Dr. Robertſon, deſcribing the calamities of theſe invaſions, ſays, that they did not ceaſe till the North, by pouring forth ſucceſſive ſwarms, was drained of people, and could no longer furniſh inſtruments of deſtruction,[a] he will appear to have fallen into the very error which he had before laboured to refute, and to ſpeak as if the northern nations were actually very populous. For they muſt have been ſo, if the number of their inhabitants at any one period had been ſufficient, beſides the ſlaughter of war, to people in ſuch a manner Thrace, Pannonia, Gaul, Spain, Africa, Italy, and England, as in ſome parts not to leave many traces of their former inhabitants. The period of the peopling of theſe countries, however, he himſelf mentions as two hundred years[b], and in ſuch a

[a] Robertſon's Charles V. vol. i. ſ. i. p. 11.

[b] Id. vol. i. ſ. i. p. 7.

time new generations would ariſe that would more than ſupply every vacancy.

The true cauſe which put a ſtop to the continuance of northern emigration was the impoſſibility any longer of making an impreſſion on the moſt deſirable countries of Europe. They were then inhabited by the deſcendants of the braveſt and moſt enterpriſing of the German tribes; and it was not probable that they ſhould ſo ſoon degenerate from the valour of their anceſtors, as to ſuffer their lands to be wreſted from them by inferior numbers and inferior ſkill, though perhaps ſuperior hardihood.

Checked for a time by the bravery and poverty of their neighbours by land, the enterpriſing ſpirit and overflowing numbers of the Scandinavian nations ſoon found vent by ſea. Feared before the reign of Charlemagne, they were repelled with difficulty by the care and vigour of that great prince; but during the diſtractions of the empire under his feeble ſucceſſors, they ſpread like a devouring flame over Lower Saxony, Friezeland, Holland, Flanders, and the banks of the Rhine as far as Mentz.

After having long ravaged the coaſts, they penetrated into the heart of France, pillaged and burnt her faireſt towns, levied immenſe tributes on her monarchs, and at length obtained by grant

grant one of the fineſt provinces of the kingdom. They made themſelves even dreaded in Spain, Italy, and Greece, ſpreading every where deſolation and terror. Sometimes they turned their arms againſt each other, as if bent on their own mutual deſtruction; at other times tranſported colonies to unknown or uninhabited countries, as if they were willing to repair in one place the horrid deſtruction of the human race occaſioned by their furious ravages in others.[a]

The maladminiſtration and civil wars of the Saxon kings of England produced the ſame effect as the weakneſs which followed the reign of Charlemagne in France[b], and for two hundred years the Britiſh iſles were inceſſantly ravaged, and often in part ſubdued, by theſe northern invaders. During the eighth, ninth, and tenth centuries, the ſea was covered with their veſſels from one end of Europe to the other[c], and the countries, now the moſt powerful in arts and arms, were the prey of their conſtant depredations. The growing and conſolidating ſtrength of theſe countries at length removed all further proſpect of ſucceſs from ſuch invaſions[d]. The nations

[a] Mallet, Introd. á l'Hiſtoire de Dannemarc, tom. i. c. x. p. 221, 223, 224. 12mo. 1766. [b] Id p. 226. [c] Id. p 221.

[d] Perhaps the civilized world could not be conſidered as perfectly ſecure from another northern or eaſtern inundation, till

nations of the north were ſlowly and reluctantly compelled to confine themſelves within their natural limits, and to exchange their paſtoral manners, and with them the peculiar facilities of plunder and emigration which they afforded, for the patient labours, and ſlow returns of trade and agriculture. But the ſlowneſs of theſe returns neceſſarily effected an important change in the manners of the people.

In ancient Scandinavia, during the time of its conſtant wars and emigrations, few, or none probably, were ever deterred from marrying by the fear of not being able to provide for a family. In modern Scandinavia, on the contrary, the frequency of the marriage union is continually checked by the moſt imperious and juſtly founded apprehenſions of this kind. This is moſt particularly the caſe in Norway, as I ſhall have occaſion to remark in another place; but the ſame fears operate in a greater or leſs degree, though every where with conſiderable force, in all parts of Europe. Happily, the more tranquil ſtate of the modern world does not demand ſuch rapid ſupplies of human beings, and the prolific

the total change in the art of war, by the introduction of gunpowder, gave to improved ſkill and knowledge the decided advantage over phyſical force.

powers

powers of nature cannot therefore be ſo generally called into action.

Mallet, in the excellent account of the northern nations which he has prefixed to his hiſtory of Denmark, obſerves, that he had not been able to diſcover any proofs that their emigrations proceeded from want of room at home[a]; and one of the reaſons which he gives is, that after a great emigration the countries often remained quite deſerted and unoccupied for a long time[b]. But inſtances of this kind I am inclined to think were rare, though they might occaſionally happen. With the habits of enterpriſe and emigration which prevailed in thoſe days, a whole people would ſometimes move in ſearch of a more fertile territory. The lands which they before occupied muſt of neceſſity be deſert for a time; and if there were any thing particularly ineligible in the ſoil or ſituation, which the total emigration of the people would ſeem to imply, it might be more congenial to the temper of the ſurrounding barbarians, to provide for themſelves better by their ſwords, than to occupy immediately theſe rejected lands. Such total emigrations proved the unwillingneſs of

[a] Hiſt. Dan. tom. i. c. ix. p. 206. [b] Id. p. 205, 206.

the

the ſociety to divide, but by no means that they were not ſtraitened for room and food at home.

The other reaſon which Mallet gives is, that in Saxony, as well as Scandinavia, vaſt tracts of land lay in their original uncultivated ſtate, having never been grubbed up or cleared; and that from the deſcriptions of Denmark in thoſe times it appeared, that the coaſts alone were peopled, but the interior parts formed one vaſt foreſt.[a] It is evident that he here falls into the common error of confounding a ſuperfluity of inhabitants with great actual population. The paſtoral manners of the people, and their habits of war and enterpriſe, prevented them from clearing and cultivating their lands[b]; and then theſe very foreſts, by reſtraining the ſources of ſubſiſtence within very narrow bounds, contributed to ſuperfluity of numbers, that is, to a

[a] Hiſt. Dan. tom. i. c. ix. p. 207.

[b] Nec arare terram aut expectare annum tam facile perſuaſeris, quam vocare hoſtes et vulnera mereri; pigrum quinimò et iners videtur ſudore acquirere quod poſſis ſanguine parare. Tacitus de mor. Germ. Nothing indeed, in the ſtudy of human nature, is more evident than the extreme difficulty with which habits are changed; and no argument therefore can be more fallacious than to infer, that theſe people are not pinched with want, who do not make a proper uſe of their lands.

population

population beyond what the ſcanty ſupplies of the country could ſupport.

There is another cauſe not often attended to, why poor, cold, and thinly-peopled countries tend generally to a ſuperfluity of inhabitants, and are ſtrongly prompted to emigration. In warmer and more populous countries, particularly thoſe abounding in great towns and manufactures, an inſufficient ſupply of food can ſeldom continue long without producing epidemics, either in the ſhape of great and ravaging plagues, or of leſs violent though more conſtant ſickneſſes. In poor, cold, and thinly-peopled countries, on the contrary, from the antiſeptic quality of the air, the miſery ariſing from inſufficient or bad food, may continue a conſiderable time without producing theſe effects, and conſequently this powerful ſtimulus to emigration continues to operate for a much longer period.[a]

I would by no means, however, be underſtood

[a] Epidemics have their ſeldomer or frequenter returns according to their ſundry ſoils, ſituations, air, &c. Hence ſome have them yearly, as Egypt and Conſtantinople; others once in four or five years, as about Tripoli and Aleppo; others, ſcarce once in ten twelve, or thirteen years, as England; others not in leſs than twenty years, as *Norway and the Northern iſlands.* Short, Hiſtory of Air, Seaſons, &c. vol. ii. p. 344.

to

to ſay, that the northern nations never undertook any expeditions unleſs prompted by ſtraitened food or circumſtances at home. Mallet relates what was probably true, that it was their common cuſtom to hold an aſſembly every ſpring for the purpoſe of conſidering in what quarter they ſhould make war[a]; and among a people who nouriſhed ſo ſtrong a paſſion for war, and who conſidered the right of the ſtrongeſt as a right divine, occaſions for it would never be wanting. Beſides this pure and diſintereſted love of war and enterpriſe, civil diſſenſions, the preſſure of a victorious enemy, a wiſh for a milder climate, or other cauſes might ſometimes prompt to emigration; but in a general view of the ſubject, I cannot help conſidering this period of hiſtory as affording a very ſtriking illuſtration of the principle of population; a principle, which appears to me to have given the original impulſe and ſpring of action, to have furniſhed the inexhauſtible reſources, and often prepared the immediate cauſes of that rapid ſucceſſion of adventurous irruptions and emigrations, which occaſioned the fall of the Roman empire; and afterwards, pouring from the thinly-peopled countries of Denmark and Norway for above two hun-

[a] Hiſt. Dan. c. ix. p. 203.

dred

dred years, ravaged and overran a great part of Europe. Without the ſuppoſition of a tendency to increaſe almoſt as great as among the Americans, the facts appear to me not to be accounted for[a]; and with ſuch a ſuppoſition we cannot be at a loſs to name the checks to the actual population, when we read the diſguſting details of thoſe unceaſing wars, and of that prodigal waſte of human life, which marked theſe barbarous periods.

Inferior checks would undoubtedly concur; but we may ſafely pronounce, that among the ſhepherds of the North of Europe war and famine were the principal checks that kept the population down to the level of their ſcanty means of ſubſiſtence.

[a] Gibbon, Robertſon, and Mallet, ſeem all rather to ſpeak of Jornandes's expreſſion *vagina nationum* as incorrect and exaggerated; but to me it appears exactly applicable, though the other expreſſion, officina gentium, at leaſt their tranſlation of it, *ſtorehouſe of nations*, may not be quite accurate.

Ex hac igitur Scanziâ inſulâ, quaſi officinâ gentium, aut certè velut vaginâ nationum egreſſi, &c. Jornandes de rebus Geticis, p. 83.

CHAP. VII.

Of the Checks to Population among modern Paſtoral Nations.

THE paſtoral tribes of Aſia by living in tents and moveable huts, inſtead of fixed habitations, are ſtill leſs connected with their territory than the ſhepherds of the north of Europe. The camp and not the ſoil is the native country of the genuine Tartar. When the forage of a certain diſtrict is conſumed, the tribe makes a regular march to freſh paſtures. In the ſummer, it advances towards the north, in the winter returns again to the ſouth; and thus in a time of moſt profound peace acquires the practical and familiar knowledge of one of the moſt difficult operations of war. Such habits would ſtrongly tend to diffuſe among theſe wandering tribes the ſpirit of emigration and conqueſt. The thirſt of rapine, the fear of a too powerful neighbour, or the inconvenience of ſcanty paſtures, have in all ages been ſufficient cauſes to urge the hordes of Scythia boldly to advance into unknown countries, where they might hope to

to find a more plentiful ſubſiſtence, or a leſs formidable enemy[a].

In all their invaſions, but more particularly when directed againſt the civilized empires of the ſouth, the Scythian ſhepherds have been uniformly actuated by a moſt ſavage and deſtructive ſpirit. When the Moguls had ſubdued the northern provinces of China, it was propoſed in calm and deliberate council, to exterminate all the inhabitants of that populous country, that the vacant land might be converted to the paſture of cattle. The execution of this horrid deſign was prevented by the wiſdom and firmneſs of a Chineſe mandarin[b]; but the bare propoſal of it exhibits a ſtriking picture, not only of the inhuman manner in which the rights of conqueſt were abuſed, but of the powerful force of habit among nations of ſhepherds, and the conſequent difficulty of the tranſition from the paſtoral to the agricultural ſtate.

To purſue, even in the moſt curſory manner, the tide of emigration and conqueſt in Aſia, the rapid increaſe of ſome tribes, and the total extinction of others, would lead much too far. During the periods of the formidable irruptions

[a] Gibbon, vol. iv. c. xxvi. p. 348.

[b] Id. vol. vi. ch. xxxiv. p. 54.

of

of the Huns, the wide extended invaſions of the Moguls, the ſanguinary conqueſts of Tamerlane and Aurengzebe, and the dreadful convulſions which attended the diſſolution as well as the formation of their empires, the checks to population are but too obvious. In reading of the devaſtations of the human race in thoſe times, when the ſlighteſt motive of caprice or convenience often involved a whole people in indiſcriminate maſſacre[a], inſtead of looking for the cauſes which prevented a further progreſs in population, we can only be aſtoniſhed at the force of that principle of increaſe, which could furniſh freſh harveſts of human beings for the ſcythe of each ſucceſſive conqueror. Our inquiries will be more uſefully directed to the preſent ſtate of the Tartar nations, and the ordinary checks to their increaſe, when not under the influence of theſe violent convulſions.

The immenſe country inhabited at preſent by thoſe deſcendants of the Moguls and Tartars, who retain nearly the ſame manners as their anceſtors, compriſes in it almoſt all the middle regions of Aſia, and poſſeſſes the advantage of a very fine and temperate climate. The ſoil is in general of great natural fertility. There

[a] Gibbon, vol. vi. ch. xxxiv. p. 55.

are

are comparatively but few genuine deſerts. The wide-extended plains without a ſhrub, which have ſometimes received that appellation, and which the Ruſſians call ſteppes, are covered with a luxuriant graſs admirably fitted for the paſture of numerous herds and flocks. The principal defect of this extenſive country is a want of water; but it is ſaid that the parts which are ſupplied with this neceſſary article would be ſufficient for the ſupport of four times the number of its preſent inhabitants, if it were properly cultivated[a]. Every Orda, or tribe, has a particular canton belonging to it, containing both its ſummer and winter paſtures; and the population of this vaſt territory, whatever it may be, is probably diſtributed over its ſurface nearly in proportion to the degree of actual fertility in the different diſtricts.

Volney juſtly deſcribes this neceſſary diſtribution in ſpeaking of the Bedoweens of Syria. "In the barren cantons, that is, thoſe which "are ill furniſhed with plants, the tribes are "feeble and very diſtant from each other, as "in the deſert of Suez, that of the Red Sea, "and the interior part of the Great Deſert. "When the ſoil is better covered, as between

[a] Geneal. Hiſt. of Tartars, vol. ii. ſec. i. 8vo. 1730.

"Damaſcus and the Euphrates, the tribes are "ſtronger and leſs diſtant. And in the culti- "vable cantons, as the Pachalic of Aleppo, the "Hauran, and the country of Gaza, the en- "campments are numerous and near each "other[a]." Such a diſtribution of inhabitants, according to the quantity of food which they can obtain in the actual ſtate of their induſtry and habits, may be applied to Grand Tartary, as well as to Syria and Arabia, and is, in fact, equally applicable to the whole earth, though the commerce of civilized nations prevents it from being ſo obvious as in the more ſimple ſtages of ſociety.

The Mahometan Tartars, who inhabit the weſtern parts of Grand Tartary, cultivate ſome of their lands, but in ſo ſlovenly and inſufficient a manner as not to afford a principal ſource of ſubſiſtence[b]. The ſlothful and warlike genius of the barbarian every where prevails, and he does not eaſily reconcile himſelf to the acquiring by labour what he can hope to acquire by rapine. When the annals of Tartary are not marked by any ſignal wars and revolutions, its domeſtic peace and induſtry are con-

[a] Voy. de Volney, tom i. ch. xxiii. p. 351. 8vo. 1787.

[b] Geneal. Hiſt. Tart. vol. ii. p. 382.

ſtantly

ſtantly interrupted by petty conteſts, and mutual invaſions for the ſake of plunder. The Mahometan Tartars are ſaid to live almoſt entirely by robbing and preying upon their neighbours, as well in peace as in war[a].

The Uſbecks who poſſeſs as maſters the kingdom of Chowaraſm, leave to their tributary ſubjects, the Sarts and Turkmans, the fineſt paſtures of their country, merely becauſe their neighbours on that ſide are too poor or too vigilant to give them hopes of ſucceſsful plunder. Rapine is their principal reſource. They are perpetually making incurſions into the territories of the Perſians, and of the Uſbecks of Great Bucharia; and neither peace nor truce can reſtrain them, as the ſlaves and other valuable effects which they carry off form the whole of their riches. The Uſbecks and their ſubjects the Turkmans are perpetually at variance; and their jealouſies, fomented often by the princes of the reigning houſe, keep the country in a conſtant ſtate of inteſtine commotion[b]. The Turkmans are always at war with the Curds and the Arabs, who often come and break the

[a] Geneal. Hiſt. Tart. vol. ii. p. 390 [b] Id. p. 430, 431.

horns of their herds, and carry away their wives and daughters[a].

The Uſbecks of Great Bucharia are reckoned the moſt civilized of all the Mahometan Tartars, yet are not much inferior to the reſt in their ſpirit of rapine[b]. They are always at war with the Perſians, and laying waſte the fine plains of the province of Choraſan. Though the country which they poſſeſs is of the greateſt natural fertility, and ſome of the remains of the ancient inhabitants practiſe the peaceful arts of trade and agriculture; yet neither the aptitude of the ſoil, nor the example which they have before them, can induce them to change their ancient habits; and they would rather pillage, rob, and kill their neighbours, than apply themſelves to improve the benefits which nature ſo liberally offers them[c].

The Tartars of the Caſatſhia Orda in Turkeſtan live in a ſtate of continual warfare with their neighbours to the north and eaſt. In the winter they make their incurſions towards the Kalmucks, who, about that time, go to ſcour the frontiers of Great Bucharia, and the

[a] Geneal. Hiſt. Tart. vol. ii. p. 426. [b] Id. p. 459.
[c] Id. p. 455.

parts

parts to the ſouth of their country. On the other ſide, they perpetually incommode the Coſacks of the Yaik, and the Nogai Tartars. In the ſummer, they croſs the mountains of Eagles, and make inroads into Siberia. And though they are often very ill treated in theſe incurſions, and the whole of their plunder is not equivalent to what they might obtain with very little labour from their lands, yet they chooſe rather to expoſe themſelves to the thouſand fatigues and dangers neceſſarily attendant on ſuch a life, than apply themſelves ſeriouſly to agriculture[a].

The mode of life among the other tribes of Mahometan Tartars preſents the ſame uniform picture, which it would be tireſome to repeat, and for which therefore I refer the reader to the Genealogical Hiſtory of the Tartars, and its valuable notes. The conduct of the author of this hiſtory himſelf, a Chan of Chowaraſm, affords a curious example of the ſavage manner in which the wars of policy, of revenge, or plunder, are carried on in theſe countries. His invaſions of Great Bucharia were frequent, and each expedition was ſignalized by the ravage of provinces, and the utter ruin and deſtruction of

[a] Geneal. Hiſt. Tart. vol. ii. p. 573, et ſeq.

towns and villages. When at any time the number of his priſoners impeded his motions, he made no ſcruple to kill them on the ſpot. Wiſhing to reduce the power of the Turkmans who were tributary to him, he invited all the principal people to a ſolemn feaſt, and had them maſſacred to the number of two thouſand. He burnt and deſtroyed their villages with the moſt unſparing cruelty, and committed ſuch devaſtations, that the effect of them returned on their authors, and the army of the victors ſuffered ſeverely from dearth[a].

The Mahometan Tartars in general hate trade, and make it their buſineſs to ſpoil all the merchants who fall into their hands[b]. The only commerce that is countenanced is the commerce in ſlaves. Theſe form a principal part of the booty which they carry off in their predatory incurſions, and are conſidered as a chief ſource of their riches. Thoſe which they have occaſion for themſelves, either for the attendance on their herds, or as wives and concubines, they keep, and the reſt they ſell[c]. The Circaſſian and Dagheſtan Tartars, and the other tribes in the neighbourhood of Caucaſus, living in a poor

[a] Geneal. Hiſt. Tart. vol. i. c. xii. [b] Id. vol. ii. p. 412.
[c] Id p. 413.

and

and mountainous country, and on that account leſs ſubject to invaſion, generally overflow with inhabitants; and when they cannot obtain ſlaves in the common way, ſteal from one another, and even ſell their own wives and children[a]. This trade in ſlaves, ſo general among the Mahometan Tartars, may be one of the cauſes of their conſtant wars; as, when a proſpect of a plentiful ſupply for this kind of traffick offers itſelf, neither peace nor alliance can reſtrain them[b].

The heathen Tartars, the Kalmucks and Moguls, do not make uſe of ſlaves, and are ſaid in general to lead a much more peaceable and harmleſs life, contenting themſelves with the produce of their herds and flocks, which form their ſole riches. They rarely make war for the ſake of plunder; and ſeldom invade the territory of their neighbours, unleſs to revenge a prior attack. They are not however without

[a] Geneal. Hiſt. Tart. vol. ii. p. 413, 414, and ch. xii.

[b] "They juſtify it as lawful to have many wives, becauſe "they ſay they bring us many children, which we can ſell "for ready money, or exchange for neceſſary conveniencies; "yet when they have not wherewithal to maintain them, "they hold it a piece of charity to murder infants new born, "as alſo they do ſuch as are ſick and paſt recovery, becauſe "they ſay they free them from a great deal of miſery." Sir John Chardin's Travels, Harris's Col. b. iii. c. ii. p. 865.

deſtructive wars. The inroads of the Mahometan Tartars oblige them to conſtant defence and retaliation; and feuds ſubſiſt between the kindred tribes of the Kalmucks and Moguls, which, fomented by the artful policy of the emperor of China, are carried on with ſuch animoſity as to threaten the entire deſtruction of one or other of theſe nations[a].

The Bedoweens of Arabia and Syria do not live in greater tranquillity than the inhabitants of Grand Tartary. The very nature of the paſtoral ſtate ſeems to furniſh perpetual occaſions for war. The paſtures which a tribe uſes at one period form but a ſmall part of its poſſeſſions. A large range of territory is ſucceſſively occupied in the courſe of the year; and as the whole of this is abſolutely neceſſary for the annual ſubſiſtence of the tribe, and is conſidered as appropriated, every violation of it, though the tribe may be at a great diſtance, is held to be a juſt cauſe of war[b]. Alliances and kindred make

[a] Geneal. Hiſt. Tart. vol. ii. p. 545.

[b] Ils ſe diſputeront la terre inculte comme parmi nous les citoyens ſe diſputent les héritages. Ainſi ils trouveront de frequentes occaſions de guerre pour la nourriture de leur beſtiaux, &c. **** ils auront autant de choſes à régler par le droit des gens qu'ils en auront peu à décider par le droit civil. Monteſ. Eſprit des Loix. l. xviii. c. xii.

theſe

theſe wars more general. When blood is ſhed more muſt expiate it; and as ſuch accidents have multiplied in the lapſe of years, the greateſt part of the tribes have quarrels between them, and live in a ſtate of perpetual hoſtility[a]. In the times which preceded Mahómet, ſeventeen hundred battles are recorded by tradition; and a partial truce of two months, which was religiouſly kept, might be conſidered, according to a juſt remark of Gibbon, as ſtill more ſtrongly expreſſive of their general habits of anarchy and warfare[b].

The waſte of life from ſuch habits might alone appear ſufficient to repreſs their population; but probably their effect is ſtill greater in the fatal check which they give to every ſpecies of induſtry, and particularly to that, the object of which is to enlarge the means of ſubſiſtence. Even the conſtruction of a well, or a reſervoir of water, requires ſome funds and labour in advance; and war may deſtroy in one day the work of many months, and the reſources of a whole year[c]. The evils ſeem mutually to produce each other. A ſcarcity of ſubſiſtence might

[a] Voy. de Volney, tom. i. c. xxii. p. 361, 362, 363.
[b] Gibbon, vol. ix. c. l. p. 238, 239.
[c] Voy. de Volney, tom. i. c. xxiii. p. 353.

at

at firſt perhaps give occaſion to the habits of war, and the habits of war in return powerfully contribute to narrow the means of ſubſiſtence.

Some tribes, from the nature of the deſerts in which they live, ſeem to be neceſſarily condemned to a paſtoral life[a]; but even thoſe which inhabit ſoils proper for agriculture have but little temptation to practiſe this art, while ſurrounded by marauding neighbours. The peaſants of the frontier provinces of Syria, Perſia, and Siberia, expoſed as they are to the conſtant incurſions of a devaſtating enemy, do not lead a life that is to be envied by the wandering Tartar or Arab. A certain degree of ſecurity is perhaps ſtill more neceſſary than richneſs of ſoil, to encourage the change from the paſtoral to the agricultural ſtate; and where this cannot be attained, the ſedentary labourer is more expoſed to the viciſſitudes of fortune, than he who leads a wandering life, and carries all his property with him[b]. Under the feeble yet oppreſſive government of the Turks, it is not uncommon for peaſants to deſert their villages and betake themſeves to a paſtoral ſtate, in which they expect to be better able to eſcape from the

[a] Voy. de Volney, tom. i. c. xxxiii. p. 350. [b] Id. p. 354.

plunder

plunder of their Turkiſh maſters, and Arab neighbours[a].

It may be ſaid, however, of the ſhepherd, as of the hunter, that if want alone could effect a change of habits, there would be few paſtoral tribes remaining. Notwithſtanding the conſtant wars of the Bedoween Arabs, and the other checks to their increaſe from the hardſhips of their mode of life, their population preſſes ſo hard againſt the limits of their food, that they are compelled from neceſſity to a degree of abſtinence, which nothing but early and conſtant habit could enable the human conſtitution to ſupport. According to Volney, the lower claſſes of the Arabs live in a ſtate of habitual miſery and famine[b]. The tribes of the deſert deny that the religion of Mahomet was made for them. For how, they ſay, can we perform ablutions when we have no water; how can we give alms when we have no riches; or what occaſion can there be to faſt during the month of Ramadan, when we faſt all the year[c]?

The power and riches of a Chaik conſiſt in the number of his tribe. He conſiders it therefore as his intereſt to encourage population with-

[a] Voy. de Volney, tom. i. c. xxiii. p. 350. [b] Id. p. 359. [c] Id. p. 380.

out

out reflecting how it may be ſupported His own conſequence much depends on a numerous progeny and kindred[a]; and in a ſtate of ſociety where power generally procures ſubſiſtence, each individual family derives ſtrengrh and importance from its numbers. Theſe ideas act ſtrongly as a bounty upon population, and co-operating with a ſpirit of generoſity which almoſt produces a community of goods[b], contribute to puſh it to its utmoſt verge, and to depreſs the body of the people in the moſt rigid poverty.

The habits of polygamy, where there have been loſſes of men in war, tend perhaps alſo to produce the ſame effect. Niebuhr obſerves, that polygamy multiplies families till many of their branches ſink into the moſt wretched miſery[c]. The deſcendants of Mahomet are found in great numbers all over the eaſt, and many of them in extreme poverty. A Mahometan is in ſome degree obliged to polygamy from a principle of obedience to his prophet, who makes one of the great duties of man to conſiſt in procreating children to glorify the Creator. Fortunately, individual intereſt corrects in ſome degree, as in

[a] Voy. de Volney, tom. i. c. xxiii. p. 366. [b] Id. p. 378.
[c] Niebuhr's Travels, vol. ii. c. v. p. 207.

many

many other inſtances, the abſurdity of the legiſlator, and the poor Arab is obliged to proportion his religious obedience to the ſcantineſs of his reſources. Yet ſtill the direct encouragements to population are extraordinarily great; and nothing can place in a more ſtriking point of view the futility and abſurdity of ſuch encouragements, than the preſent ſtate of theſe countries. It is univerſally agreed, that if their population be not leſs than formerly, it is indubitably not greater; and it follows as a direct conſequence, that the great increaſe of ſome families has abſolutely puſhed the others out of exiſtence. Gibbon, ſpeaking of Arabia, obſerves, that "The "meaſure of population is regulated by the "means of ſubſiſtence, and the inhabitants of "this vaſt peninſula might be outnumbered "by the ſubjects of a fertile and induſtrious "province." Whatever may be the encouragements to marriage, this meaſure cannot be paſſed. While the Arabs retain their preſent manners, and the country remains in its preſent

[a] It is rather a curious circumſtance, that a truth ſo important, which has been ſtated and acknowledged by ſo many authors, ſhould ſo rarely have been purſued to its conſequences. People are not every day dying of famine. How then is the population regulated to the meaſure of the means of ſubſiſtence?

ſtate

ſtate of cultivation, the promiſe of Paradiſe to every man who had ten children would but little increaſe their numbers, though it might greatly increaſe their miſery. Direct encouragements to population have no tendency whatever to change theſe manners, and promote cultivation. Perhaps indeed they have a contrary tendency, as the conſtant uneaſineſs from poverty and want which they occaſion muſt encourage the marauding ſpirit[a], and multiply the occaſions of war.

Among the Tartars, who from living in a more fertile ſoil are comparatively richer in cattle, the plunder to be obtained in predatory incurſions is greater than among the Arabs. And as the conteſts are more bloody from the ſuperior ſtrength of the tribes, and the cuſtom of making ſlaves is general, the loſs of numbers in war will be more conſiderable. Theſe two circumſtances united enable ſome hordes of fortunate robbers to live in a ſtate of plenty, in compariſon of their leſs enterpriſing neighbours. Profeſſor Pallas gives a particular account of two

[a] Auſſi arrive-t'il chaque jour des accidens, des enlevemens de beſtiaux; et cette guerre de maraude eſt une de celles qui occupent d'avantage les Arabes. Voy. de Volney, tom. i. c. xxiii. p. 364.

wandering

wandering tribes ſubject to Ruſſia, one of which ſupports itſelf almoſt entirely by plunder, and the other lives as peaceably as the reſtleſſneſs of its neighbours will admit. It may be curious to trace the different checks to population that reſult from theſe different habits.

The Kirgiſiens, according to Pallas,[a] live at their eaſe in compariſon of the other wandering tribes that are ſubject to Ruſſia. The ſpirit of liberty and independence which reigns amongſt them, joined to the facility with which they can procure a flock ſufficient for their maintenance, prevents any of them from entering into the ſervice of others. They all expect to be treated as brothers, and the rich, therefore, are obliged to uſe ſlaves. It may be aſked what are the cauſes which prevent the lower claſſes of people from increaſing till they become poor?

Pallas has not informed us how far vicious cuſtoms with reſpect to women, or the reſtraints on marriage from the fear of a family, may have contributed to this effect; but perhaps the de-

[a] Not having been able to procure the work of Pallas on the hiſtory of the Mongol nations, I have here made uſe of a general abridgment of the works of the Ruſſian travellers, in 4 vols. oct. publiſhed at Berne and Lauſanne in 1781 and 1784, entitled Découvertes Ruſſes, tom. iii. p. 399.

ſcription

ſcription which he gives of their civil conſtitution, and licentious ſpirit of rapine, may be alone almoſt ſufficient to account for it. The Chan cannot exerciſe his authority but through the medium of a council of principal perſons, choſen by the people; and even the decrees thus confirmed are continually violated with impunity.[a] Though the plunder and capture of perſons, of cattle, and of merchandize, which the Kirgiſiens exerciſe on their neighbours the Kazalpacs, the Bucharians, the Perſians, the Truchemens, the Kalmucks, and the Ruſſians, are prohibited by their laws, yet no perſon is afraid to avow them. On the contrary, they boaſt of their ſucceſſes in this way as of the moſt honourable enterpriſes. Sometimes they paſs their frontiers alone to ſeek their fortune, ſometimes collect in troops under the command of an able chief, and pillage entire caravans. A great number of Kirgiſiens, in exerciſing this rapine, are either killed or taken into ſlavery; but about this the nation troubles itſelf very little. When theſe ravages are committed by private adventurers, each retains what he has taken, whether cattle or women. The

[a] Découv. Ruſſ. tom. iii. p. 389.

male

male ſlaves and the merchandize are ſold to the rich, or to foreign traders [a].

With theſe habits, in addition to their national wars, which from the fickle and turbulent diſpoſition of the tribe are extremely frequent [b], we may eaſily conceive that the checks to population from violent cauſes may be ſo powerful as nearly to preclude all others. Occaſional famines may ſometimes attack them in their wars of devaſtation [c], their fatiguing predatory incurſions, or from long droughts, and mortality of cattle; but in the common courſe of things the approach of poverty would be the ſignal for a new marauding expedition; and the poor Kirgiſien would either return with ſufficient to ſupport him, or loſe his life or liberty in the attempt. He who determines to be rich or die, and does not ſcruple the means, cannot long live poor.

The Kalmucks, who before their emigration in 1771 inhabited the fertile ſteppes of the Wolga under the protection of Ruſſia, lived in

[a] Découv. Ruſſ. tom. iii. p. 396, 397, 398. [b] Id. p. 378.

[c] Cette multitude dévaſte tout ce qui ſe trouve ſur ſon paſſage, ils emmenent avec eux tout le bétail qu'ils ne conſomment pas, et réduiſent à l'eſclavage les femmes, les enfans, et les hommes, qu'ils n'ont pas maſſacrés. Id p. 390.

general in a different manner. They were not often engaged in any very bloody wars[a]; and the power of the Chan being abſolute[b], and the civil adminiſtration better regulated than among the Kirgiſiens, the marauding expeditions of private adventurers were checked. The Kalmuck women are extremely prolific. Barren marriages are rare, and three or four children are generally ſeen playing round every hut. From which it may naturally be concluded (Pallas obſerves), that they ought to have mutiplied greatly during the hundred and fifty years that they inhabited tranquilly the ſteppes of the Wolga. The reaſons which he gives for their not having increaſed ſo much as might be expected are, the many accidents occaſioned by falls from horſes, the frequent petty wars between their different princes, and with their different neighbours; and particulaly the numbers among the poorer claſſes who die of hunger, of miſery, and every ſpecies of calamity, of which the children are moſt frequently the victims[c].

It appears that when this tribe put itſelf un-

[a] Découv. Ruſſ. tom. iii. p. 221. The tribe is deſcribed here under the name of Torgots, which was their appropriate appellation. The Ruſſians called them by the more general name of Kalmucks.

[b] Id. p. 327. [c] Id. p. 319, 320, 321.

der

der the protection of Ruſſia, it had ſeparated from the Soongares, and was by no means numerous. The poſſeſſion of the fertile ſteppes of the Wolga and a more tranquil life ſoon increaſed it, and in 1662 it amounted to fifty thouſand families[a]. From this period to 1771, the time of its migration, it ſeems to have increaſed very ſlowly. The extent of paſtures poſſeſſed would not probably admit of a much greater population, as at the time of its flight from theſe quarters, the irritation of the Chan at the conduct of Ruſſia was ſeconded by the complaints of the people of the want of paſture for their numerous herds. At this time the tribe amounted to between 55 and 60,000 families. Its fate in this curious migration was what has probably been the fate of many other wandering hordes, who, from ſcanty paſtures or other cauſes of diſcontent, have attempted to ſeek for freſh ſeats. The march took place in the winter, and numbers periſhed on this painful journey from cold, famine, and miſery. A great

[a] Découv. Ruſſ. tom. iii. p. 221. Tooke's View of the Ruſſian Empire, vol. ii. b. ii. p. 30. Another inſtance of rapid increaſe preſents itſelf in a colony of baptized Kalmucks, who received from Ruſſia a fertile diſtrict to ſettle in. From 8695, which was its number in 1754, it had increaſed in 1771 to 14,000. Tooke's View of the Ruſ. Em. vol. ii. b. ii. p. 32, 33.

part was either killed or taken by the Kirghiſes; and thoſe who reached their place of deſtination, though received at firſt kindly by the Chineſe, were afterwards treated with extreme ſeverity[a].

Before this migration, the lower claſſes of the Kalmucks had lived in great poverty and wretchedneſs, and had been reduced habitually to make uſe of every animal, plant, or root, from which it was poſſible to extract nouriſhment[b]. They very ſeldom killed any of their cattle that were in health, except indeed they were ſtolen, and then they were devoured immediately for fear of a diſcovery. Wounded or worn-out horſes, and beaſts that had died of any diſeaſe except a contagious epidemic, were conſidered as moſt deſirable food. Some of the pooreſt Kalmucks would eat the moſt putrid carrion, and even the dung of their cattle[c]. A great number of children periſhed of courſe from bad nouriſhment[d]. In the winter all the lower claſſes ſuffered ſeverely from cold and hunger[e]. In general one third of their ſheep, and often much more, died in the winter, in

[a] Tooke's View of the Ruſ. Emp. vol. ii. b. ii. p. 29, 30, 31. Découv. Ruſ. tom. iii. p. 221 [b] Id. p. 275, 276.
[c] Id. p. 272, 273, 274. [d] Id. p. 324. [e] Id. p. 310.

ſpite

ſpite of all their care; and if a froſt came late in the ſeaſon after rain and ſnow, ſo that the cattle could not get at the graſs, the mortality among their herds became general, and the poorer claſſes were expoſed to inevitable famine[a].

Malignant fevers, generated principally by their putrid food and the putrid exhalations with which they were ſurrounded, and the ſmall-pox which is dreaded like the plague, ſometimes thinned their numbers[b]; but in general it appears that their population preſſed ſo hard againſt the limits of their means of ſubſiſtence, that want, with the diſeaſes ariſing from it, might be conſidered as the principal check to their increaſe.

A perſon travelling in Tartary during the ſummer months would probably ſee extenſive ſteppes unoccupied, and graſs in profuſion ſpoiling for want of cattle to conſume it. He would infer, perhaps, that the country could ſupport a much greater number of inhabitants, even ſuppoſing them to remain in their ſhepherd ſtate. But this might be a haſty and unwarranted concluſion. A horſe or any other working ani-

[a] Découv. Ruſ. tom iii. p. 270. [b] Id. p. 311, 312, 313.

mal is ſaid to be ſtrong only in proportion to the ſtrength of his weakeſt part. If his legs be ſlender and feeble, the ſtrength of his body will be but of little conſequence; or if he wants power in his back and haunches, the ſtrength which he may poſſeſs in his limbs can never be called fully into action. The ſame reaſoning muſt be applied to the power of the earth to ſupport living creatures. The profuſion of nouriſhment which is poured forth in the ſeaſons of plenty cannot all be conſumed by the ſcanty numbers that were able to ſubſiſt through the ſeaſon of ſcarcity. When human induſtry and foreſight are directed in the beſt manner, the population that the ſoil can ſupport is regulated by the average produce throughout the year; but among animals, and in the uncivilized ſtates of man, it will be much below this average. The Tartar would find it extremely difficult to collect and carry with him ſuch a quantity of hay, as would feed all his cattle well during the winter. It would impede his motions, expoſe him to the attacks of his enemies, and an unfortunate day might deprive him of the labours of a whole ſummer, as in the mutual invaſions which occur it ſeems to be the univerſal practice to burn and deſtroy all the forage and proviſions which cannot

cannot be carried away.[a] The Tartar, therefore, provides only for the moſt valuable of his cattle during the winter, and leaves the reſt to ſupport themſelves by the ſcanty herbage which they can pick up. This poor living, combined with the ſevere cold, naturally deſtroys a conſiderable part of them.[b] The population of the tribe is meaſured by the population of its herds; and the average numbers of the Tartars, as of the horſes that run wild in the deſert, are repreſſed ſo low by the annual returns of the cold and ſcarcity of winter, that they cannot conſume all the plentiful offerings of ſummer.

Droughts and unfavourable ſeaſons have, in proportion to their frequency, the ſame effects as the winter. In Arabia[c] and a great part of Tartary[d] droughts are not uncommon; and if the periods of their return be not above ſix or eight years, the average population can never

[a] On mit le feu à toutes les meules de bled et de fourrage. ****Cent cinquante villages également incendiés. Mémoires du Baron de Tott, tom. i. p. 272. He gives a curious deſcription of the devaſtation of a Tartar army, and of its ſufferings in a winter campaign. Cette journée couta à l'armée plus de 3,000 hommes, et 30,000 chevaux, qui perirent de froid, p. 267. [b] Découvertes Ruſſes, vol. iii. p. 261.

[c] Voy. de Volney, vol. i. c. 23. p. 353. [d] Découv. Ruſſ. tom. i. p. 467. ii. p. 10, 11, 12, &c.

much exceed what the ſoil can ſupport during theſe unfavourable times. This is true in every ſituation; but perhaps in the ſhepherd ſtate, man is peculiarly expoſed to be affected by the ſeaſons; and a great mortality of parent ſtock is an evil more fatal, and longer felt, than the failure of a crop of grain. Pallas and the other Ruſſian travellers ſpeak of epizooties as very common in theſe parts of the world.[a]

As among the Tartars a family is always honourable, and women are reckoned very ſerviceable in the management of the cattle and the houſehould concerns, it is not probable that many are deterred from marriage, from the fear of not being able to ſupport a family.[b] At the ſame time, as all wives are bought of their parents, it muſt ſometimes be out of the power of the poorer claſſes to make the purchaſe. The Monk Rubruquis, ſpeaking of this cuſtom, ſays, that as parents keep all their daughters till they can ſell them, their maids are ſometimes very ſtale before they are married.[c] Among the Mahometan Tartars, female captives would

[a] Découv. Ruſſ. tom. i. p. 290, &c. ii. p. 11. iv. p. 304.
[b] Geneal. Hiſt. of the Tartars, vol. ii. p. 407. [c] Travels of Wm. Rubruquis in 1253. Harris's Collection of Voy. b. i. c. ii. p. 561.

ſupply

ſupply the place of wives;[a] but among the pagan Tartars, who make but little uſe of ſlaves, the inability to buy wives muſt frequently operate on the poorer claſſes as a check to marriage, particularly as their price would be kept up by the practice of polygamy among the rich.[b]

The Kalmucks are ſaid not to be jealous,[c] and, from the frequency of the venereal diſeaſe among them,[d] we may infer that a certain degree of promiſcuous intercourſe prevails.

On the whole therefore it would appear, that in that department of the ſhepherd life which has been conſidered in this chapter, the principal checks which keep the population down to the level of the means of ſubſiſtence are, reſtraint, from inability to obtain a wife, vicious cuſtoms with reſpect to women, epidemics, wars, famine, and the diſeaſes ariſing from extreme poverty. The three firſt checks and the laſt appear to have operated with much leſs force among the ſhepherds of the north of Europe.

[a] Découv. Ruſſ. tom iii. p. 413. [b] Pallas takes notice of the ſcarcity of women, or the ſuperabundance of males among the Kalmucks, notwithſtanding the more conſtant expoſure of the male ſex to every kind of accident. Découv. Ruſ. tom. iii. p. 320. [c] Découv. Ruſſ. tom. iii. p. 239. [d] Id. p. 324.

CHAP.

CHAP. VIII.

Of the Checks to Population in different parts of Africa.

THE parts of Africa viſited by Park are deſcribed by him as neither well cultivated nor well peopled. He found many extenſive and beautiful diſtricts entirely deſtitute of inhabitants; and in general, the borders of the different kingdoms were either very thinly peopled, or perfectly deſerted. The ſwampy banks of the Gambia, the Senegal, and other rivers towards the coaſt appeared to be unfavourable to population, from being unhealthy;[a] but other parts were not of this deſcription; and it was not poſſible, he ſays, to behold the wonderful fertility of the ſoil, the vaſt herds of cattle proper both for labour and food, and reflect on the means which preſented themſelves of vaſt inland navigation, without lamenting that a country ſo abundantly gifted by nature ſhould remain in its preſent ſavage and neglected ſtate.

[a] Park's Interior of Africa, c. xx. p. 261. 4to.
[b] Id. c. xxiii. p. 312.

The

The cauſes of this neglected ſtate clearly appear, however, in the diſcription which Park gives of the general habits of the negro nations. In a country divided into a thouſand petty ſtates, moſtly independent and jealous of each other, it is natural to imagine, he ſays, that wars frequently originate from very frivolous provocations. The wars of Africa are of two kinds, one called killi, that which is openly avowed; and the other, tegria, plundering or ſtealing. Theſe latter are very common, particularly about the beginning of the dry ſeaſon when the labours of harveſt are over, and proviſions are plentiful. Theſe plundering excurſions always produce ſpeedy retalitation.[a]

The inſecurity of property ariſing from this conſtant expoſure to plunder, muſt neceſſarily have a moſt baneful effect on induſtry. The deſerted ſtate of all the frontier provinces ſufficiently proves to what degree it operates. The nature of the climate is unfavourable to the exertion of the negro nations; and, as there are not many opportunities of turning to advantage the ſurplus produce of their labour, we cannot be ſurpriſed that they ſhould in general content themſelves with cultivating only as much ground

[a] Park's Africa, c. xxii. p. 291 & ſeq.

as

as is neceſſary for their own ſupport.[a] Theſe cauſes appear adequately to account for the uncultivated ſtate of the country.

The waſte of life in theſe conſtant wars and predatory incurſions muſt be conſiderable; and Park agrees with Buffon in ſtating, that, independent of violent cauſes, longevity is rare among the negroes. At forty, he ſays, moſt of them become greyhaired and covered with wrinkles, and but few of them ſurvive the age of fifty-five or ſixty.[b] Buffon attributes this ſhortneſs of life to the premature intercourſe of the ſexes, and very early and exceſſive debauchery.[c] On this ſubject perhaps he has been led into exaggerations; but, without attributing too much to this cauſe, it ſeems agreeable to the analogy of nature to ſuppoſe, that as the natives of hot climates arrive much earlier at maturity than the inhabitants of colder countries, they ſhould alſo periſh earlier.

[a] Park's Africa, c. xxi. p. 280. [b] Id. p. 284.

[c] L'uſage prématuré des femmes eſt puet-être la cauſe de la briéveté de leur vie; les infans ſont ſi débauchés, et ſi peu contraints par les pères et mères, que des leur plus tendre jeuneſſe ils ſe livrent à tout ce que la nature leur ſuggére, rien n'eſt ſi rare que de trouver dans ce peuple quelque fille qui puiſſe ſe ſouvenir du tems auquel elle a ceſſée d'être vierge. Hiſtoire Naturelle de l'Homme, vol. vi. p. 235. 5th edit. 12mo. 31 vols.

According

According to Buffon, the negro women are extremely prolific; but it appears from Park, that they are in the habit of ſuckling their children two or three years, and as the huſband during this time devotes the whole of his attention to his other wives, the family of each wife is ſeldom numerous.[a] Polygamy is univerſally allowed among the negro nations,[b] and conſequently without a greater ſuperabundance of women than we have reaſon to ſuppoſe, many will be obliged to live unmarried. This hardſhip will principally fall on the ſlaves, who according to Park are in the proportion of three to one to the free men.[c] A maſter is not permitted to ſell his domeſtic ſlaves, or thoſe born in his own houſe, except in caſe of famine, to ſupport himſelf and family. We may imagine therefore, that he will not ſuffer them to increaſe beyond the employment which he has for them. The ſlaves which are purchaſed, or

[a] Park's Africa, c. xx. p. 265. As the accounts of Park, and thoſe on which Buffon has founded his obſervations, are probably accounts of different nations, and certainly at different periods, we cannot infer that either is incorrect becauſe they differ from each other: but as far as Park's obſervations extend, they are certainly entitled to more credit than any of the travellers which preceded him.

[b] Id. c. xx. p. 267. [c] Id. c. xxii. p. 287.

the

the priſoners taken in war, are entirely at the diſpoſal of their maſters.[a] They are often treated with extreme ſeverity, and in any ſcarcity of women, ariſing from the polygamy of the free men, would of courſe be deprived of them without ſcruple. Few or no women, probably, remain in a ſtate of ſtrict celibacy; but in proportion to the number married, the ſtate of ſociety does not ſeem to be favourable to increaſe.

Africa has been at all times the principal mart of ſlaves. The drains of its population in this way have been great and conſtant, particularly ſince their introduction into the European colonies; but perhaps, as Dr. Franklin obſerves, it would be difficult to find the gap that has been made by a hundred years exportation of negroes which has blackened half America.[b] For, notwithſtanding this conſtant emigration, the loſs of numbers from inceſſant war, and the checks to increaſe from vice and other cauſes, it appears that the population is continually paſſing beyond the means of ſubſiſtence. According to Park, ſcarce years and famines are frequent. Among the four principal cauſes of ſlavery in Africa, he mentions, famine next to

[a] Park's Africa, c. xxii. p. 288. [b] Franklin's Miſcell. p. 9.

war;

war;[a] and the expreſs permiſſion given to maſters to ſell their domeſtic ſlaves for the ſupport of their family, which they are not allowed to do on any leſs urgent occaſion,[b] ſeems to imply the not unfrequent recurrence of ſevere want. During a great ſcarcity which laſted for three years in the countries of the Gambia, great numbers of people became ſlaves. Park was aſſured by Dr. Laidley, that at that time many free-men came, and begged with great earneſtneſs to be put upon his ſlave chain to ſave them from periſhing with hunger.[c] While Park was in Manding, a ſcarcity of proviſions was ſeverely felt by the poor, as the following circumſtance painfully convinced him. Every evening during his ſtay, he obſerved five or ſix women come to the Manſa's houſe, and receive each of them a certain quantity of corn. "Obſerve that boy," ſaid the Manſa to him, pointing to a fine child about five years of age—, "his mother has ſold him to me for forty days "proviſion for herſelf and the reſt of her family. I have bought another boy in the "ſame manner.[d]" In Sooſeeta, a ſmall Jallonka village, Mr. Park was informed by the

[a] Park's Africa, c. xxii. p. 295. [b] Id. p. 288. note.
[c] Id. 295. [d] Id. c. xix. p. 248.

maſter

maſter that he could furniſh no proviſions, as there had lately been a great ſcarcity in that part of the country. He aſſured him, that before they had gathered in their preſent crops, all the inhabitants of Kullo had been for twenty-nine days without taſting corn, during which time they had ſupported themſelves entirely on the yellow powder which is found in the pods of the nitta, ſo called by the natives, a ſpecies of mimoſa, and upon the ſeeds of the bamboo cane, which, when properly pounded and dreſſed, taſte very much like rice.[a]

It may be ſaid, perhaps, that as, according to Park's account, much good land remains uncultivated in Africa, the dearths may be attributed to a want of people; but if this were the caſe, we can hardly ſuppoſe that ſuch numbers would yearly be ſent out of the country. What the negro nations really want is ſecurity of property, and its general concomitant, induſtry; and without theſe, an increaſe of people would only greatly aggravate their diſtreſſes. If, in order to fill up thoſe parts that appeared to be deficient in inhabitants, we were to ſuppoſe a high bounty given on children, the effects

[a] Park's Africa, c. xxv. p. 336.

would

would probably be, the increaſe of wars, the increaſe of the exportation of ſlaves, and a great increaſe of miſery, but little or no real increaſe of population.[a]

The cuſtoms of ſome nations, and the prejudices of all, operate in ſome degree like a bounty of this kind. The Shangalla negroes, according to Bruce, hemmed in on every ſide by active and powerful enemies, and leading a life of ſevere labour and of conſtant apprehenſion, feel but little deſire for women. It is the wife and not the man that is the cauſe of their polygamy. Though they live in ſeparate tribes or nations, yet theſe nations are again ſubdivided into families. In fighting, each family attacks and defends by itſelf, and theirs is the ſpoil and plunder who take it. The mothers, therefore, ſenſible of the diſadvantages of a ſmall family, ſeek to multiply it by all the means in their

[a] The two great requiſites juſt mentioned for a real increaſe of population, namely, ſecurity of property, and its natural concomitant, induſtry, could not be expected to exiſt among the Negro nations while the traffic in ſlaves, on the coaſt, gave ſuch conſtant encouragement to the plundering excurſions which Park deſcribes. Now that this traffic is happily ſoon to be at an end, we may rationally hope that before the lapſe of any long period, future travellers will be able to give us a more favourable picture of the ſtate of ſociety among the African nations, than that which has been drawn by Park.

power; and it is by their importunity, that the huſband ſuffers himſelf to be overcome.[a] The motives to polygamy among the Galla are deſcribed to be the ſame, and in both nations the firſt wife courts the alliance of a ſecond for her huſband; and the principal argument that ſhe makes uſe of is, that their families may be joined together and be ſtrong, and that her children, by being few in number, may not fall a prey to their enemies in the day of battle.[b] It is highly probable that this extreme deſire of having large families defeats its own purpoſe; and that the poverty and miſery which it occaſions cauſe fewer children to grow up to maturity, than if their parents confined their attention to the rearing of a ſmaller number.

Bruce is a great friend to polygamy, and defends it, in the only way in which it is capable of being defended, by aſſerting, that, in the countries in which it principally prevails, the proportion of girls to boys born, is two or three to one. A fact ſo extraordinary, however, cannot be admitted upon the authority of thoſe vague inquiries on which he founds his opinion. That there are conſiderably more women living

[a] Bruce's Travels to diſcover the Source of the Nile, vol. ii. p. 556. 4to. [b] Bruce's Travels to diſcover the Source of the Nile, vol. ii. p. 223.

than

than men in theſe climates, is in the higheſt degree probable. Even in Europe, where it is known with certainty that more boys are born than girls, the women in general exceed the men in number; and we may imagine, that, in hot and unhealthy climates, and in a barbarous ſtate of ſociety, the accidents to which the men are expoſed muſt be very greatly increaſed. The women by leading a more ſedentary life, would ſuffer leſs from the effects of a ſcorching ſun and ſwampy exhalations; they would in general be more exempt from the diſorders ariſing from debauchery; but above all, they would eſcape in great meaſure the ravages of war. In a ſtate of ſociety in which hoſtilities never ceaſe, the drains of men from this cauſe alone muſt occaſion a great diſproportion of the ſexes, particularly where it is the cuſtom, as related of the Galla in Abyſſinia,[a] to maſſacre indiſcriminately all the males, and ſave only the marriageable women from the general deſtruction. The actual diſproportion of the ſexes ariſing from theſe cauſes probably firſt gave riſe to the permiſſion of polygamy, and has perhaps contributed to make us more eaſily believe, that the proportion of male and female children in hot

[a] Bruce's Travels to diſcover the Source of the Nile, vol. iv. p. 411.

climates is very different from what we have experienced it to be in the temperate zone.

Bruce, with the uſual prejudices on this ſubject, ſeems to think that the celibacy of a part of the women is fatal to the population of a country. He obſerves of Jidda, that, on account of the great ſcarcity of proviſions, which is the reſult of an extraordinary concourſe of people to a place almoſt deſtitute of the neceſſaries of life, few of the inhabitants can avail themſelves of the privilege granted by Mahomet. They cannot, therefore, marry more than one wife; and from this cauſe ariſes, he ſays, the want of people and the large number of unmarried women.[a] But it is evident, that the want of people in this barren ſpot ariſes ſolely from the want of proviſions, and that if each man had four wives, the number of people could not be permanently increaſed by it.

In Arabia Felix, according to Bruce, where every ſort of proviſion is exceedingly cheap, where the fruits of the ground, the general food of man, are produced ſpontaneouſly, the ſupport of a number of wives coſts no more than that of ſo many ſlaves or ſervants. Their food is the ſame, and a blue cotton ſhirt, a habit common to them all, is not more chargeable

[a] Bruce, vol. i. c. xi. p. 280.

for

for the one than for the other. The conſequence is, he ſays, that celibacy in women is prevented, and the number of people increaſed in a fourfold ratio by polygamy, to what it is in thoſe countries that are monogamous.[a] And yet, notwithſtanding this fourfold increaſe, it does not appear that any part of Arabia is really very populous.

The effect of polygamy in increaſing the number of married women and preventing celibacy is beyond diſpute; but how far this may tend to increaſe the actual population, is a very different conſideration. It may perhaps contribute to preſs the population harder againſt the limits of the food; but the ſqualid and hopeleſs poverty which this occaſions is by no means favourable to induſtry; and in a climate in which there appears to be many prediſpoſing cauſes of ſickneſs, it is difficult to conceive that this ſtate of wretchedneſs does not powerfully contribute to the extraordinary mortality, which has been obſerved in ſome of theſe countries.

According to Bruce, the whole coaſt of the Red Sea, from Suez to Babelmandel, is extremely unwholeſome, but more eſpecially between the tropics. Violent fevers, called there nedad, make the principal figure in this fatal liſt, and

[a] Bruce, vol. i. c. xi. p. 281.

generally terminate the third day in death.[a] Fear frequently ſeizes ſtrangers upon the firſt ſight of the great mortality which they obſerve on their firſt arrival.

Jidda, and all the parts of Arabia adjacent to the eaſtern coaſt of the Red Sea, are in the ſame manner very unwholeſome.[b]

In Gondar fevers perpetually reign, and the inhabitants are all the colour of a corpſe.[c]

In Sirè, one of the fineſt countries in the world, putrid fevers of the very worſt kind are almoſt conſtant.[d] In the low grounds of Abyſſinia, in general, malignant tertians occaſion a great mortality.[e] And every where the ſmall-pox makes great ravages, particularly among the nations bordering on Abyſſinia, where it ſometimes extinguiſhes whole tribes.[f]

The effect of poverty, bad diet, and its almoſt conſtant concomitant, want of cleanlineſs, in aggravating malignant diſtempers, is well known; and this kind of wretchedneſs ſeems generally to prevail. Of Tchagaſſa, near Gondar, Bruce obſerves, that the inhabitants, notwithſtanding their threefold harveſts, are miſerably poor.[g] At Adowa, the capital of Tigré, he makes the

[a] Bruce, vol. iii. p. 33. [b] Id. vol. i. p. 279. [c] Id. vol. iii. p. 178. [d] Id. p. 153. [e] Id. vol. iv. p. 22. [f] Id. vol. iii. c. iii. p. 68. c. vii. p. 178. vol. i. c. xiii. p. 353. [g] Id. vol. iii. c. vii. p. 195.

ſame

ſame remark, and applies it to all the Abyſſinian farmers. The land is let yearly to the higheſt bidder, and in general the landlord furniſhes the ſeed on condition to receive half of the produce; but it is ſaid that he is a very indulgent maſter who does not take another quarter for the riſk he has run; ſo that the quantity which comes to the ſhare of the huſbandman is not more than ſufficient to afford a bare ſuſtenance to his wretched family.[a]

The Agows, one of the moſt conſiderable nations of Abyſſinia in point of number, are deſcribed by Bruce as living in a ſtate of miſery and penury ſcarcely to be conceived. We ſaw a number of women, he ſays, wrinkled and ſunburnt, ſo as ſcarcely to appear human, wandering about under a burning ſun, with one and ſometimes two children upon their backs, gathering the ſeeds of bent graſs to make a kind of bread[b]. The Agow women begin to bear children at eleven years old. They marry generally about that age, and there is no ſuch thing as barrenneſs known among them.[c] In Dixan, one of the frontier towns of Abyſſinia, the only trade is that of ſelling children. Five hundred are exported annually to Arabia; and

[a] Bruce, vol. iii. c. v. p. 124. [b] Id. c. xix. p. 738.
[c] Id. p. 739.

in times of ſcarcity, Bruce obſerves, four times that number.[a]

In Abyſſinia polygamy does not regularly prevail. Bruce, indeed, makes rather a ſtrange aſſertion on this ſubject, and ſays, that though we read from the Jeſuits a great deal about marriage and polygamy, yet that there is nothing which may be averred more truly, than that there is no ſuch thing as marriage in Abyſſinia.[b] But, however this may be, it appears clear, that few or no women live a life of celibacy in Abyſſinia, and that the prolific powers of nature are nearly all called into action, except as far as they are checked by promiſcuous intercourſe. This, however, from the ſtate of manners deſcribed by Bruce, muſt operate very powerfully.[c]

The check to population from war appears to be exceſſive. For the laſt four hundred years, according to Bruce, it has never ceaſed to lay deſolate this unhappy country;[d] and the ſavage manner in which it is carried on ſurround it with tenfold deſtruction. When Bruce firſt entered Abyſſinia, he ſaw on every ſide ruined villages deſtroyed to the loweſt foundation by Ras Michael in his march to Gondar.[e] In the

[a] Bruce, vol. iii. c. iii. p. 88. [b] Id c. xi. p. 306.
[c] Id. p. 292. [d] Id. vol. iv. p. 119. [e] Id. vol. iii. c. vii. p. 192.

courſe

courſe of the civil wars, while Bruce was in the country, he ſays, "The rebels had begun to lay "waſte Dembea, and burnt all the villages in "the plain, from ſouth to weſt; making it like "a deſert between Michael and Faſil.**** The "king often aſcended to the top of the tower "of his palace, and contemplated with the "greateſt diſpleaſure, the burning of his rich vil-"lages in Dembea."[a] In another place, he ſays, "the whole country of Degweſſa, was to-"tally deſtroyed; men, women, and children "were entirely extirpated without diſtinction "of age or ſex; the houſes raſed to the ground, "and the country about it left as deſolate as "after the deluge. The villages belonging to "the king were as ſeverely treated; a univerſal "cry was heard from all parts, but no one dared "to ſuggeſt any means of help."[b] In Maitſha, one of the provinces of Abyſſinia, he was told, that if ever he met an old man, he might be ſure that he was a ſtranger, as all that were natives died by the lance young.[c]

If the picture of the ſtate of Abyſſinia drawn by Bruce be in any degree near the truth, it places in a ſtrong point of view the force of

[a] Bruce, vol. iv. c. v. p. 112. [b] Id. vol. iv. p. 258.
[c] Id. c. i. p. 14.

that

that principle of increaſe, which preſerves a population fully up to the level of the means of ſubſiſtence, under the checks of war, peſtilential diſeaſes, and promiſcuous intercourſe, all operating in an exceſſive degree.

The nations which border on Abyſſinia are univerſally ſhort-lived. A Shangalla woman at twenty-two is, according to Bruce, more wrinkled and deformed by age than is a European woman at ſixty.[a] It would appear, therefore, that, in all theſe countries, as among the northern ſhepherds, in the times of their conſtant emigrations, there is a very rapid ſucceſſion of human beings, and the difference in the two inſtances is, that our northern anceſtors died out of their own country, whereas theſe die at home. If accurate regiſters of mortality were kept among theſe nations, I have little doubt that it would appear, that, including the mortality from wars, 1 in 17 or 18 at the leaſt dies annually, inſtead of 1 in 34 or 36, as in the generality of European ſtates.

The deſcription which Bruce gives of ſome parts of the country, which he paſſed through on his return home, preſents a picture more dreadful even than the ſtate of Abyſſinia, and

[a] Bruce, vol. ii. p. 559.

ſhows,

ſhows, how little population depends on the birth of children, in compariſon of the production of food, and of thoſe circumſtances of natural and political ſituation which influence this produce.

"At half paſt ſix," Bruce ſays, "we arrived "at Garigana, a village whoſe inhabitants had "all periſhed with hunger the year before; "their wretched bones being all unburied, and "ſcattered upon the ſurface of the ground "where the village formerly ſtood. We en- "camped among the bones of the dead; no "ſpace could be found free from them."[a]

Of another town or village in his route he obſerves, "The ſtrength of Teawa was 25 horſe. "The reſt of the inhabitants might be 1200, "naked, miſerable, and deſpicable Arabs, like "the reſt of thoſe which live in villages.**** "Such was the ſtate of Teawa. Its conſequence "was only to remain till the Daveina Arabs "ſhould reſolve to attack it, when its cornfields "being burnt and deſtroyed in a night by a "multitude of horſemen, the bones of its in- "habitants ſcattered upon the earth would be "all its remains, like thoſe of the miſerable vil- "lage of Garigana."[b]

[a] Bruce, vol. iv. p. 349. [b] Id. p. 353.

"There

"There is no water between Teawa and "Beyla. Once Ingedidema and a number of "villages were ſupplied with water from wells, "and had large crops of Indian corn ſown "about their poſſeſſions. The curſe of that "country the Arabs Daveina have deſtroyed "Ingedidema, and all the villages about it; "filled up their wells, burnt their crops, and "expoſed all the inhabitants to die by fa-"mine."[a]

Soon after leaving Sennaar, he ſays, "We "began now to ſee the effects of the quantity "of rain having failed. There was little corn "ſown, and that ſo late, as to be ſcarcely above "ground. It ſeems the rains begin later as "they paſs northward. Many people were here "employed in gathering graſs-ſeeds to make a "very bad kind of bread. Theſe people appear "perfect ſkeletons, and no wonder, as they live "upon ſuch fare. Nothing increaſes the dan-"ger of travelling and prejudice againſt ſtran-"gers more, than the ſcarcity of proviſions in "the country through which you are to paſs."[b]

"Came to Eltic, a ſtraggling village about "half a mile from the Nile, in the north of a

[a] Bruce, vol. iv. p. 411. [b] Id. p. 511.

"large

"large bare plain; all paſture, except the banks "of the river which are covered with wood. "We now no longer ſaw any corn ſown. The "people here were at the ſame miſerable em-"ployment as thoſe we had ſeen before, that of "gathering graſs-ſeeds."[a]

Under ſuch circumſtances of climate and political ſituation, though a greater degree of foreſight, induſtry, and ſecurity, might conſiderably better their condition, and increaſe their population, the birth of a greater number of children without theſe concomitants would only aggravate their miſery, and leave their population where it was.

The ſame may be ſaid of the once flouriſhing and populous country of Egypt. Its preſent depreſſed ſtate has not been cauſed by the weakening of the principle of increaſe, but by the weakening of the principle of induſtry and foreſight, from the inſecurity of property conſequent on a moſt tyrannical and oppreſſive government. The principle of increaſe in Egypt at preſent does all that is poſſible for it to do. It keeps the population fully up to the level of the means of ſubſiſtence; and, were its power ten

[a] Bruce, vol. iv. p. 511.

times

times greater than it really is, it could do no more.

The remains of ancient works, the vaſt lakes, canals, and large conduits for water deſtined to keep the Nile under control, ſerving as reſervoirs to ſupply a ſcanty year, and as drains and outlets to prevent the ſuperabundance of water in wet years, ſufficiently indicate to us, that the ancients by art and induſtry contrived to fertilize a much greater quantity of land from the overflowings of their river, than is done at preſent; and to prevent, in ſome meaſure, the diſtreſſes which are now ſo frequently experienced from a redundant, or inſufficient inundation.[a] It is ſaid of the governor Petronius, that, effecting by art what was denied by nature, he cauſed abundance to prevail in Egypt under the diſadvantages of ſuch a deficient inundation, as had always before been accompanied by dearth.[b] A flood too great is as fatal to the huſbandman, as one that is deficient; and the ancients had, in conſequence, drains and outlets to ſpread the ſuperfluous waters over the thirſty ſands of Lybia, and render even the deſert habitable. Theſe works are now all out of repair, and by ill

[a] Bruce, vol. iii. c. xvii. p. 710.

[b] Voyage de Volney, tom. i. c. iii. p. 33. 8vo.

management

management often produce miſchief inſtead of good. The cauſes of this neglect, and conſequently of the diminiſhed means of ſubſiſtence, are obviouſly to be traced to the extreme ignorance and brutality of the government, and the wretched ſtate of the people. The Mamelukes, in whom the principal power reſides, think only of enriching themſelves, and employ for this purpoſe what appears to them to be the ſimpleſt method, that of ſeizing wealth wherever it may be found, of wreſting it by violence from the poſſeſſor, and of impoſing continually new and arbitrary contributions.* Their ignorance and brutality, and the conſtant ſtate of alarm in which they live, prevent them from having any views of enriching the country, the better to prepare it for their plunder. No public works therefore are to be expected from the government, and no individual proprietor dares to undertake any improvement which might imply the poſſeſſion of capital, as it would probably be the immediate ſignal of his deſtruction. Under ſuch circumſtances we cannot be ſurpriſed, that the ancient works are neglected, that the ſoil is ill cultivated, and that the means of ſubſiſtence, and conſequently the population, are greatly re-

* Voyage de Volney, tom. i. c. xii. p. 170.

duced.

duced. But ſuch is the natural fertility of the Delta from the inundations of the Nile, that even without any capital employed upon the land, without a right of ſucceſſion, and conſequently almoſt without a right of property, it ſtill maintains a conſiderable population in proportion to its extent, ſufficient, if property were ſecure, and induſtry well directed, gradually to improve and extend the cultivation of the country, and reſtore it to its former ſtate of proſperity. It may be ſafely pronounced of Egypt, that it is not the want of population that has checked its induſtry, but the want of induſtry that has checked its population.

The immediate cauſes which keep down the population to the level of the preſent contracted means of ſubſiſtence are but too obvious. The peaſants are allowed for their maintenance only ſufficient to keep them alive.[a] A miſerable ſort of bread made of doura without leaven or flavour, cold water, and raw onions make up the whole of their diet. Meat and fat, of which they are paſſionately fond, never appear but on great occaſions, and among thoſe who are more at their eaſe. Their habitations are huts made of earth, where a ſtranger would be ſuffocated

[a] Voyage de Volney, tom. i. c. xii. p. 172.

with

with the heat and ſmoke; and where the diſeaſes that are generated by want of cleanlineſs, by moiſture, and by bad nouriſhment, often viſit them and commit great ravages. To theſe phyſical evils are added a conſtant ſtate of alarm, the fear of the plunder of the Arabs, and the viſits of the Mamelukes, the ſpirit of revenge that is tranſmitted in families, and all the evils of a continued civil war.[a]

In the year 1783 the plague was very fatal; and in 1784 and 1785 a dreadful famine reigned in Egypt, from a deficiency in the inundation of the Nile. Volney draws a frightful picture of the miſery that was ſuffered on this occaſion. The ſtreets of Cairo, which at firſt were full of beggars, were ſoon cleared of all theſe objects, who either periſhed or fled. A vaſt number of unfortunate wretches, in order to eſcape death, ſpread themſelves over all the neighbouring countries, and the towns of Syria were inundated with Egyptians. The ſtreets and public places were crowded with extenuated and dying

[a] Volney, tom. i. c. xii. p. 173. This ſketch of the ſtate of the peaſantry in Egypt given by Volney ſeems to be nearly confirmed by all other writers on this ſubject; and particularly in a valuable paper intitled, *Conſidérations générales ſur l'Agriculture de l'Egypte, par L. Reynier.* (Mémoires ſur l'Egypte, tom. iv. p. 1.)

ſkeletons. All the moſt revolting modes of ſatisfying the cravings of hunger were reſorted to; the moſt diſguſting food was devoured with eagerneſs; and Volney mentions the having ſeen, under the walls of ancient Alexandria, two miſerable wretches ſeated on the carcaſe of a camel, and diſputing with the dogs its putrid fleſh. The depopulation of the two years was eſtimated at one ſixth of all the inhabitants.[a]

[a] Voy. de Volney, tom. i. c. xii. ſ. ii.

CHAP. IX.

Of the Checks to Population in Siberia, Northern and Southern.

THE inhabitants of the moſt northern parts of Aſia ſubſiſt chiefly by hunting and fiſhing; and we may ſuppoſe, therefore, that the checks to their increaſe are of the ſame nature as thoſe which prevail among the American Indians; except that the check from war is conſiderably leſs, and the check from famine perhaps greater than in the temperate regions of America. M. de Leſſeps, who travelled from Kamtſchatka to Peterſburg with the papers of the unfortunate Pérouſe, draws a melancholy picture of the miſery that is ſometimes ſuffered in this part of the world from a ſcarcity of food. He obſerves, while at Bolcheretſk, a village of Kamtſchatka, "very heavy rains are injurious in this country, "becauſe they occaſion floods, which drive the "fiſh from the rivers. A famine, the moſt diſ-"treſſing to the poor Kamtſchadales, is the re-"ſult, as it happened laſt year in all the villages "along the weſtern coaſt of the peninſula. "This dreadful calamity occurs ſo frequently "in this quarter, that the inhabitants are ob-"liged to abandon their dwellings, and repair

" with their families to the borders of the Kamt-
" ſchatka river, where they hope to find better
" reſources, fiſh being more plentiful in this
" river. Mr. Kaſloff (the Ruſſian officer who
" conducted Mr. de Leſſeps) had intended to
" proceed along the weſtern coaſt; but the
" news of this famine determined him contrary
" to his wiſhes to return, rather than be driven
" to the neceſſity of ſtopping half way, or
" periſhing with hunger."[a] Though a differ-
ent route was purſued, yet in the courſe of the
journey almoſt all the dogs which drew the
ſledges died for want of food; and every dog,
as ſoon as he failed, was immediately devoured
by the others.[b]

Even at Okotſk, a town of conſiderable trade,
the inhabitants wait with hungry impatience
for the breaking up of the river Okhota in the
ſpring. When M. de Leſſeps was there, the
ſtock of dried fiſh was nearly exhauſted. Meal
was ſo dear that the common people were un-
able to purchaſe it. On drawing the ſeine pro-
digious numbers of ſmall fiſh were caught, and
the joy and clamour redoubled at the ſight.
The moſt famiſhed were firſt ſerved. M. de
Leſſeps feelingly ſays, " I could not refrain from

[a] Travels in Kamtſchatka, vol. i. p. 147. 8vo. Eng. tranſ. 1790. [b] Id. p. 264.

" tears

" tears on perceiving the ravenouſneſs of theſe " poor creatures;****whole families contended " for the fiſh, which were devoured raw before " my eyes."[a]

Throughout all the northern parts of Siberia, the ſmall-pox is very fatal. In Kamtſchatka, according to M. de Leſſeps, it has carried off three fourths[b] of the native inhabitants.

Pallas confirms this account; and, in deſcribing the Oſtiacks on the Obi, who live nearly in the ſame manner, obſerves, that this diſorder makes dreadful ravages among them, and may be conſidered as the principal check to their increaſe.[c] The extraordiuary mortality of the ſmall-pox among theſe people is very naturally accounted for by the extreme heat, filth, and putrid air, of their underground habitations. Three or four Oſtiack families are crowded together in one yourt, and nothing can be ſo diſguſting as their mode of living. They never waſh their hands, and the putrid remains of the fiſh, and the excrements of the children, are never cleared away. From this deſcription, ſays Pallas, one may eaſily form an idea of the ſtench, the fœtid vapours, and humidity of their yourts.[d]

[a] Travels in Kamtſchatka, vol. ii. p. 252, 253.

[b] Id. vol. i. p. 128.

[c] Voy. de Pallas, tom. iv. p. 68. 4to. 5 vols. 1788. Paris.

[d] Voy. de Pallas, tom. iv. p. 60.

They have ſeldom many children. It is a rare thing to ſee three or four in one family. The reaſon which Pallas gives is, that ſo many die young on account of their bad nouriſhment.[a] To this, perhaps, ſhould be added the ſtate of miſerable and laborious ſervitude to which the women are condemned,[b] which certainly prevents them from being prolific.

The Samoyedes, Pallas thinks, are not quite ſo dirty as the Oſtiacks, becauſe they are more in motion during the winter in hunting; but he deſcribes the ſtate of the women amongſt them as a ſtill more wretched and laborious ſervitude;[c] and conſequently the check to population from this cauſe would be greater.

Moſt of the natives of theſe inhoſpitable regions live nearly in the ſame miſerable manner, which it would be therefore mere repetition to deſcribe. From what has been ſaid, we may form an idea of the principal checks that keep the actual population down to the level of the ſcanty means of ſubſiſtence which theſe dreary countries afford.

In ſome of the ſouthern parts of Siberia, and in the diſtricts adjoining the Wolga, the Ruſſian travellers deſcribe the ſoil to be of extraordinary fertility. It conſiſts in general of a fine black

[a] Id. p. 72. [b] Id. p. 60 [c] Id. p. 92.

mould

mould of ſo rich a nature as not to require or even to bear dreſſing. Manure only makes the corn grow too luxuriantly, and ſubjects it to fall to the ground and be ſpoiled. The only mode of recruiting this kind of land which is practiſed is, by leaving it one year out of three in fallow; and proceeding in this way, there are ſome grounds, the vigour of which is ſaid to be inexhauſtible.[a] Yet notwithſtanding the facility with which, as it would appear, the moſt plentiful ſubſiſtence might be procured, many of theſe diſtricts are thinly peopled, and in none of them, perhaps, does population increaſe in the proportion that might be expected from the nature of the ſoil.

Such countries ſeem to be under that moral impoſſibility of increaſing, which is well deſcribed by Sir James Steuart.[b] If either from the nature of government, or the habits of the people, obſtacles exiſt to the ſettlement of freſh farms or the ſubdiviſion of the old ones, a part of the ſociety might ſuffer want even in the midſt of apparent plenty. It is not enough that a country ſhould have the power of producing food in abundance, but the ſtate of ſociety muſt be ſuch as to afford the means of its proper diſtribution;

[a] Voy. de Pallas, tom. iv. p. 5.

[b] Polit. Econ. b. i. c. v. p. 30. 4to.

and the reaſon why population goes on ſlowly in theſe countries is, that the ſmall demand for labour prevents that diſtribution of the produce of the ſoil, which, while the diviſions of land remain the ſame, can alone make the lower claſſes of ſociety partakers of the plenty which it affords. The mode of agriculture is deſcribed to be extremely ſimple, and to require very few labourers. In ſome places the ſeed is merely thrown on the fallow.[a] The buck-wheat is a common culture; and though it is ſown very thin, yet one ſowing will laſt five or ſix years, and produce every year twelve or fifteen times the original quantity. The ſeed which falls during the time of the harveſt is ſufficient for the next year, and it is only neceſſary to paſs a harrow once over it in the ſpring. And this is continued till the fertility of the ſoil begins to diminiſh. It is obſerved, very juſtly, that the cultivation of no kind of grain can ſo exactly ſuit the indolent inhabitants of the plains of Siberia.[b]

With ſuch a ſyſtem of agriculture, and with few or no manufactures, the demand for labour muſt be very eaſily ſatisfied. Corn will undoubtedly be very cheap; but labour will be in proportion ſtill cheaper. Though the farmer

[a] Voy. de Pallas, tom. i. p. 250.

[b] Découv. Ruſſ. vol. iv. p. 329. 8vo. 4 vols. Berne.

may

may be able to provide an ample quantity of food for his own children, yet the wages of his labourer will not be ſufficient to enable him to rear up a family with eaſe.

If, from obſerving the deficiency of population, compared with the fertility of the ſoil, we were to endeavour to remedy it by giving a bounty upon children and thus enabling the labourer to rear up a greater number; what would be the conſequence? Nobody would want the work of theſe ſupernumerary labourers that were thus brought into the market. Though the ample ſubſiſtence of a man for a day might be purchaſed for a penny, yet nobody will give theſe people a farthing for their labour. The farmer is able to do all that he wiſhes, all that he thinks neceſſary in the cultivation of the ſoil, by means of his own family, and the one or two labourers which he might have before. As theſe people, therefore, can give him nothing that he wants, it is not to be expected that he ſhould overcome his natural indolence, and undertake a larger and more troubleſome concern, merely to provide them gratuitouſly with food. In ſuch a ſtate of things, when the very ſmall demand for manufacturing labour is ſatisfied, what are the reſt to do? They are, in fact,

as

as completely without the means of ſubſiſtence as if they were living upon a barren ſand. They muſt either emigrate to ſome place where their work is wanted, or periſh miſerably of poverty. Should they be prevented from ſuffering this laſt extremity by a ſcanty ſubſiſtence given to them, in conſequence of a ſcanty and only occaſional uſe of their labour, it is evident that though they might exiſt themſelves, they would not be in a capacity to marry and continue to increaſe the population.

It will probably be ſaid, that if there were much good land unuſed, new ſettlements and diviſions would of courſe take place, and the redundant population would raiſe its own food. But though there are many countries where good land remains uncultivated, there are very few where it may be obtained by the firſt perſon who chooſes to occupy it. Even were this the caſe, all the obſtacles to a rapid increaſe of population would not be immediately removed. The ſupernumerary labourer whom I have deſcribed as earning only a bare ſubſiſtence, would find it difficult to collect ſuch funds as would enable him to build a houſe, to purchaſe ſtock and utenſils, and to ſubſiſt till he could bring his new land into proper order, and obtain an adequate return. Even the chil-

dren of the farmer, when grown up, would not eaſily provide theſe neceſſary funds. In a ſtate of ſociety where the market for corn is extremely narrow, and the price very low, the cultivators are always poor; and though they may be able amply to provide for their family in the ſimple article of food; yet they cannot realiſe a capital to divide among their children, and enable them to undertake the cultivation of freſh land. Though this neceſſary capital might be very ſmall, yet even this ſmall ſum the farmer perhaps cannot acquire; for when he grows a greater quantity of corn than uſual, he finds no purchaſer for it,[a] and cannot convert it into any permanent article which will enable any of his children to command an equivalent portion of ſubſiſtence or labour in future.[b] He often, therefore, contents himſelf with growing only what is ſufficient for the immediate demands of his family, and the narrow market to which he is

[a] Il y a fort peu de débit dans le pays, parce que le plupart des habitans ſont cultivateurs et élevent eux mêmes des beſtiaux. Voy. de Pallas, tom. iv. p. 4.

[b] In addition to the cauſes here mentioned, I have lately been informed that one of the principal reaſons why large tracts of rich land lie uncultivated in this part of the world is the ſwarm of locuſts which at certain ſeaſons covers theſe diſtricts, and from the ravages of which it is impoſſible to protect the riſing crop,

accuſtomed,

accuſtomed. And if he has a large family, many of his children probably fall into the rank of labourers, and their further increaſe is checked, as in the caſe of the labourer before deſcribed, by a want of the means of ſubſiſtence.

It is not therefore a direct encouragement to the procreation and rearing of children that is wanted in theſe countries, in order to increaſe their population; but the creation of an effectual demand for the produce of the ſoil, by promoting the means of its diſtribution. This can only be effected either by the introduction of manufactures, and by inſpiring the cultivator with a taſte for them; or by aſſiſting new coloniſts and the children of the old cultivators with capital to enable them to occupy ſucceſſively, and bring into cultivation all the land that is fit for it, and thus enlarge the internal market.

The late Empreſs of Ruſſia adopted both theſe means of increaſing the population of her dominions. She encouraged both manufacturers and cultivators; and furniſhed to foreigners of either deſcription capital free of all intereſt for a certain term of years.[a] Theſe well-directed

[a] Tooke's View of the Ruſſian Empire, vol. ii. p. 242. The principal effect, perhaps of theſe importations of foreigners was the introduction of free men inſtead of ſlaves, and of German induſtry inſtead of Ruſſian indolence; but the introduction

rected efforts, added to what had been done by Peter I, had, as might be expected, a conſiderable effect; and the Ruſſian territories, particularly the Aſiatic part of them, which had ſlumbered for centuries with a population nearly ſtationary, or at moſt increaſing very languidly, ſeem to have made a ſudden ſtart of late years. Though the population of the more fertile provinces of Siberia be ſtill very inadequate to the richneſs of the ſoil; yet in ſome of them agriculture flouriſhes in no inconſiderable degree, and great quantities of corn are grown. In a general dearth which happened in 1769, the province of Iſetſk was able, notwithſtanding a ſcanty harveſt, to ſupply in the uſual manner the foundries and forges of Ural, beſide preſerving from the horrors of famine all the neighbouriug provinces.[a] And in the territory of Kraſnoyarſk, on the ſhores of the Yeniſſey, in ſpite of the indolence and drunkenneſs of the inhabitants, the abundance of corn is ſo great that no inſtance has ever been known of a general failure.[b] Pallas juſtly obſerves, if we conſider that Siberia not two hundred years ago

tion of that part of capital which conſiſts in machinery would be a very great point, and the cheapneſs of manufactures would ſoon give the cultivators a taſte for them.

[a] Voy. de Pallas, tom. iii. p. 10.

[b] Voy. de Pallas. tom. iv. p. 3.

was

was a wilderneſs utterly unknown, and in point of population was even far behind the almoſt deſert tracts of North America, we may juſtly be aſtoniſhed at the preſent ſtate of this part of the world and at the multitude of its Ruſſian inhabitants, who in numbers greatly exceed the natives.[a]

When Pallas was in Siberia, proviſions in theſe fertile diſtricts, particularly in the environs of Kraſnoyarſk, were moſt extraordinarily cheap. A pood, or forty pounds, of wheaten flour, was ſold for about twopence halfpenny, an ox for five or ſix ſhillings, and a cow for three or four.[b] This unnatural cheapneſs, owing to a want of vent for the products of the ſoil, was perhaps the principal check to induſtry. In the period which has ſince elapſed, the prices have riſen conſiderably;[c] and we may conclude, therefore, that the object wanted has been in a great meaſure attained, and that the population proceeds with rapid ſtrides.

Pallas, however, complains, that the intentions of the empreſs reſpecting the peopling of Siberia were not always well fulfilled by her ſubordinate agents, and that the proprietors to whoſe care this was left often ſent off coloniſts, in every reſpect unfit for the purpoſe, in regard

[a] Id. p. 6. [b] Id. p. 3.

[c] Tooke's View of the Ruſſian Empire, vol. iii. p. 239.

to

to age, diſeaſe, and want of induſtrious habits.[a] Even the German ſettlers in the diſtricts near the Wolga are, according to Pallas, deficient in this laſt point,[b] and this is certainly a moſt eſſential one. It may indeed be ſafely aſſerted that the importation of induſtry is of infinitely more conſequence to the population of a country, than the importation of men and women conſidered only with regard to numbers. Were it poſſible at once to change the habits of a whole people, and to direct its induſtry at pleaſure, no government would ever be reduced to the neceſſity of encouraging foreign ſettlers. But to change long-exiſting habits is of all enterpriſes the moſt difficult. Many years muſt elapſe under the moſt favourable circumſtances, before the Siberian boor will poſſeſs the induſtry and activity of an Engliſh labourer. And though the Ruſſian government has been inceſſant in its endeavours to convert the paſtoral tribes of Siberia to agriculture; yet many obſtinately perſiſt in bidding defiance to any attempts that can be made to wean them from their injurious ſloth.[c]

Many other obſtacles concur to prevent that rapid growth of the Ruſſian colonies which the procreative power would permit. Some of the low countries of Siberia are unhealthy from the

[a] Voy. de Pallas, tom. v. p. 5. [b] Id. p. 253.
[c] Tooke's Ruſſian Empire, vol. iii. p. 313.

number

number of marſhes which they contain,[a] and great and waſting epizooties are frequent among the cattle.[b] In the diſtricts near the Wolga, though the ſoil is naturally rich, yet droughts are ſo frequent, that there is ſeldom more than one good harveſt out of three.[c] The coloniſts of Saratof, after they had been ſettled for ſome years, were obliged to remove on this account to other diſtricts, and the whole expenſe of building their houſes, amounting to above a million of rubles, was remitted to them by the Empreſs.[d] For purpoſes either of ſafety or con-

[a] Voy. de Pallas, tom. iii. p. 16. Though in countries where the procreative power is never fully called into action, unhealthy ſeaſons and epidemics have but little effect on the average population; yet in new colonies which are differently circumſtanced in this reſpect, they materially impede its progreſs. This point is not ſufficiently underſtood. If in countries which were either ſtationary or increaſing very ſlowly, all the immediate checks to population, which had been obſerved, were to continue in force, no abundance of food could materially increaſe the number of people. But the preciſe way in which ſuch an abundance operates is by diminiſhing the immediate checks which before prevailed. Thoſe, however, which may remain, either from the difficulty of changing habits, or from any unfavourable circumſtances in the ſoil or climate, will ſtill continue to operate in preventing the procreative power from producing its full effect.

[b] Id. p. 17. tom. v. p. 411. [c] Id p. 252 et ſeq.

[d] Tooke's Ruſſian Empire, vol. ii. p. 245.

venience

venience, the houſes of each colony are all built contiguous, or nearly ſo, and not ſcattered about upon the different farms. A want of room is in conſequence ſoon felt in the immediate neighbourhood of the village, while the diſtant grounds remain in a ſtate of very imperfect cultivation. On obſerving this in the colony of Kotſcheſnaia, Pallas propoſed that a certain part ſhould be removed by the Empreſs to other diſtricts, that the remainder might be left more at their eaſe[a]. This propoſal ſeems to prove that ſpontaneous diviſions of this kind did not often take place, and that the children of the coloniſts might not always find an eaſy mode of ſettling themſelves, and rearing up freſh families. In the flouriſhing colony of the Moravian brethren in Serepta, it is ſaid that the young people cannot marry without the conſent of their prieſts; and that their conſent is not in general granted till late.[b] It would appear, therefore, that among the obſtacles to the increaſe of population, even in theſe new colonies the preventive check has its ſhare. Population can never increaſe with great rapidity but when the real price of common labour is very high, as in America; and from the ſtate of ſociety in this part of the

[a] Voy. de Pallas, tom. v. p. 253. [b] Id. p. 175.

Ruſſian territories, and the conſequent want of a proper vent for the produce of induſtry, this effect, which uſually accompanies new colonies, and is eſſential to their rapid growth, does not take place in any conſiderable degree.[a]

[a] Other cauſes may concur in reſtraining the population of Siberia, which have not been noticed by Pallas. In general, it ſhould be obſerved, with regard to all the immediate checks to population, which I either have had or ſhall have occaſion to mention, that as it is evidently impoſſible to aſcertain the extent to which each acts, and the proportion of the whole procreative power which it impedes, no accurate inferences reſpecting the actual ſtate of population can be drawn from them *a priori*. The prevailing checks in two different nations may appear to be exactly the ſame as to kind, yet if they are different in degree, the rate of increaſe in each will, of courſe, be as different as poſſible. All that can be done, therefore, is, to proceed as in phyſical inquiries; that is, firſt to obſerve the facts, and then account for them from the beſt lights that can be collected.

CHAP. X.

Of the Checks to Population in the Turkiſh Dominions and Perſia.

In the Aſiatic parts of the Turkiſh dominions it will not be difficult, from the accounts of travellers, to trace the checks to population and the cauſes of its preſent decay; and as there is little difference in the manners of the Turks, whether they inhabit Europe or Aſia, it will not be worth while to make them the ſubject of diſtinct conſideration.

The fundamental cauſe of the low ſtate of population in Turkey, compared with its extent of territory, is undoubtedly the nature of the government. Its tyranny, its feebleneſs, its bad laws, and worſe adminiſtration of them, with the conſequent inſecurity of property, throw ſuch obſtacles in the way of agriculture that the means of ſubſiſtence are neceſſarily decreaſing yearly, and with them, of courſe, the number of people. The miri, or general land-tax paid to the ſultan, is in itſelf moderate[a]; but

[a] Voy. de Volney, tom. ii. c. xxxvii. p. 373. (8vo. 1787.)

but by abuſes inherent in the Turkiſh government, the pachas and their agents have found out the means of rendering it ruinous. Though they cannot abſolutely alter the impoſt which has been eſtabliſhed by the ſultan, they have introduced a multitude of changes, which without the name produce all the effects of an augmentation.[a] In Syria, according to Volney, having the greateſt part of the land at their diſpoſal, they clog their conceſſions with burdenſome conditions, and exact the half, and ſometimes even two-thirds of the crop. When the harveſt is over, they cavil about loſſes, and as they have the power in their hands, they carry off what they think proper. If the ſeaſon fail, they ſtill exact the ſame ſum, and expoſe every thing that the poor peaſant poſſeſſes to ſale. To theſe conſtant oppreſſions are added a thouſand accidental extortions. Sometimes a whole village is laid under contribution for ſome real or imaginary offence. Arbitrary preſents are exacted on the acceſſion of each governor; graſs, barley, and ſtraw, are demanded for his horſes; and commiſſions are multiplied, that the ſoldiers who carry the orders may live upon the ſtarv-

[a] Voy. de Volney, tom. ii. c. xxxvii. p. 373. (8vo. 1787.)

ing

ing peaſants, whom they treat with the moſt brutal inſolence and injuſtice.[a]

The conſequence of theſe depredations is that the poorer claſs of inhabitants, ruined, and unable any longer to pay the miri, become a burden to the village, or fly into the cities; but the miri is unalterable, and the ſum to be levied muſt be found ſomewhere. The portion of thoſe who are thus driven from their homes falls on the remaining inhabitants, whoſe burden, though at firſt light, now becomes inſupportable. If they ſhould be viſited by two years of drought and famine, the whole village is ruined and abandoned; and the tax which it ſhould have paid is levied on the neighbouring lands.[b]

The ſame mode of proceeding takes place with regard to the tax on the Chriſtians, which has been raiſed by theſe means from three, five, and eleven piaſtres, at which it was firſt fixed, to thirty-five and forty, which abſolutely impoveriſhes thoſe on whom it is levied, and obliges them to leave the country. It has been remarked that theſe exactions have made a rapid progreſs during the laſt forty years, from which time are dated the decline of agriculture

[a] Voy. de Volney, tom. ii. c. xxxvii.

[b] Id. c. xxxvii. p. 375.

the depopulation of the country, and the diminution in the quantity of ſpecie carried into Conſtantinople.[a]

The peaſants are every where reduced to a little flat cake of barley or doura, onions, lentils, and water. Not to loſe any part of their corn, they leave in it all ſorts of wild grain, which often produce bad conſequences. In the mountains of Lebanon and Nablous, in time of dearth, they gather the acorns from the oaks, which they eat after boiling or roaſting them on the aſhes.[b]

By a natural conſequence of this miſery, the art of cultivation is in the moſt deplorable ſtate. The huſbandman is almoſt without inſtruments, and thoſe he has are very bad. His plough is frequently no more than the branch of a tree cut below a fork, and uſed without wheels. The ground is tilled by aſſes and cows, rarely by oxen, which would beſpeak too much riches. In the diſtricts expoſed to the Arabs, as in Paleſtine, the countryman muſt ſow with his muſket in his hand; and ſcarcely does the corn turn yellow before it is reaped and concealed in ſubterraneous caverns. As little as poſſible is

[a] Voy. de Volney, tom ii. ch. xxxvii p. 376.

[b] Id. p. 377.

employed

employed for ſeed corn, becauſe the peaſants ſow no more than is barely neceſſary for their ſubſiſtence. Their whole induſtry is limited to a ſupply of their immediate wants; and to procure a little bread, a few onions, a blue ſhirt, and a bit of woollen, much labour is not neceſſary. "The peaſant lives therefore in diſ-"treſs; but at leaſt he does not enrich his ty-"rants, and the avarice of deſpotiſm is its own "puniſhment."[a]

This picture which is drawn by Volney, in deſcribing the ſtate of the peaſants in Syria, ſeems to be confirmed by all the other travellers in theſe countries; and, according to Eton, it repreſents very nearly the condition of the peaſants in the greateſt part of the Turkiſh dominions.[b] Univerſally, the offices of every denomination are ſet up to public ſale, and in the intrigues of the ſeraglio, by which the diſpoſal of all places is regulated, every thing is done by means of bribes. The pachas, in conſequence, who are ſent into the provinces, exert to the utmoſt their power of extortion; but are always outdone by the officers immediately below

[a] Voy. de Volney, tom. ii. c. xxxvii. p. 379.
[b] Eton's Turkiſh Emp. c. viii. 2d edit. 1799.

them, who, in their turn, leave room for their ſubordinate agents.[a]

The pacha muſt raiſe money to pay the tribute, and alſo to indemnify himſelf for the purchaſe of his office, ſupport his dignity, and make a proviſion in caſe of accidents; and as all power, both military and civil, centres in his perſon from his repreſenting the ſultan, the means are at his diſcretion, and the quickeſt are invariably conſidered as the beſt.[b] Uncertain of to-morrow, he treats his province as a mere tranſient poſſeſſion, and endeavours to reap, if poſſible, in one day, the fruit of many years, without the ſmalleſt regard to his ſucceſſor, or the injury that he may do to the permanent revenue.[c]

The cultivator is neceſſarily more expoſed to theſe extortions than the inhabitants of the towns. From the nature of his employment he is fixed to one ſpot, and the productions of agriculture do not admit of being eaſily concealed. The tenure of the land and the right of ſucceſſion are beſides uncertain. When a father dies, the inheritance reverts to the ſultan, and the

[a] Eton's Turk. Emp. c. ii. p. 55. [b] Voy. de Volney, tom. ii. c. xxxiii p. 347. [c] Id. p. 350.

children

children can only redeem the ſucceſſion by a conſiderabe ſum of money. Theſe conſiderations naturally occaſion an indifference to landed eſtates. The country is deſerted, and each perſon is deſirous of flying to the towns, where he will not only in general meet with better treatment, but may hope to acquire a ſpecies of wealth which he can more eaſily conceal from the eyes of his rapacious maſters.[a]

To complete the ruin of agriculture, a maximum is in many caſes eſtabliſhed, and the peaſants are obliged to furniſh the towns with corn at a fixed price. It is a maxim of Turkiſh policy, originating in the feebleneſs of the government and the fear of popular tumults, to keep the price of corn low in all the conſiderable towns. In the caſe of a failure in the harveſt, every perſon who poſſeſſes any corn is obliged to ſell it at the price fixed under pain of death; and if there be none in the neighbourhood, other diſtricts are ranſacked for it.[b] When Conſtantinople is in want of proviſions, ten provinces are perhaps famiſhed for a ſupply.[c] At Damaſcus, during the ſcarcity in 1784, the people paid only one penny farthing a pound

[a] Voy. de Volney, tom. ii. c. xxxvi. p. 369.
[b] Id. c. xxxviii. p. 38. [c] Id. c. xxxiii. p. 345.

for

for their bread, while the peaſants in the villages were abſolutely dying with hunger.[a]

The effect of ſuch a ſyſtem of government on agriculture need not be inſiſted upon. The cauſes of the decreaſing means of ſubſiſtence are but too obvious; and the checks which keep the population down to the level of theſe decreaſing reſources may be traced with nearly equal certainty; and will appear to include almoſt every ſpecies of vice and miſery that is known.

It is obſerved in general that the Chriſtian families conſiſt of a greater number of children than the Mahometan families where polygamy prevails.[b] This is an extraordinary fact; becauſe though polygamy, from the unequal diſtribution of women which it occaſions, be naturally unfavourable to the population of a whole country; yet the individuals who are able to ſupport a plurality of wives ought certainly in the natural courſe of things to have a greater number of children than thoſe who are confined to one. The way in which Volney principally accounts for this fact is that, from the practice of polygamy, and very early marriages, the Turks

[a] Voy. de Volney, tom. ii. c. xxxviii. p. 381.

[b] Eton's Turkiſh Emp. c. vii. p. 275.

are

are enervated while young, and impotence at thirty is very common.[a] Eton notices an unnatural vice as prevailing in no inconſiderable degree among the common people, and conſiders it as one of the checks to the population;[b] but the five principal cauſes of depopulation which he enumerates, are,

1. The plague, from which the empire is never entirely free.

2. Thoſe terrible diſorders which almoſt always follow it, at leaſt in Aſia.

3. Epidemic and endemic maladies in Aſia which makes as dreadful ravages as the plague itſelf, and which frequently viſit that part of the empire.

4. Famine.

5. And laſtly, the ſickneſſes which always follow a famine, and which occaſion a much greater mortality.[c]

He afterwards gives a more particular account of the devaſtations of the plague in different parts of the empire, and concludes by obſerving, that if the number of the Mahometans have decreaſed, this cauſe alone is adequate to the

[a] Voy. de Volney, tom. ii. c. xl. p. 445.
[b] Eton's Turkiſh Emp. c. vii. p. 275 [c] Id. p. 264.

effect;

effect;[a] and that, things going on in their preſent train, the Turkiſh population will be extinct in another century.[b] But this inference, and the calculations which relate to it, are without doubt erroneous. The increaſe of population in the intervals of theſe periods of mortality is probably greater than he is aware of. At the ſame time it muſt be remarked that in a country where the induſtry of the huſbandman is confined to the ſupply of his neceſſary wants, where he ſows only to prevent himſelf from ſtarving, and is unable to accumulate any ſurplus produce, a great loſs of people is not eaſily recovered, as the natural effects from the diminiſhed numbers cannot be felt in the ſame degree as in countries where induſtry prevails, and property is ſecure.

According to the Perſian legiſlator Zoroaſter, to plant a tree, to cultivate a field, to beget children, are meritorious acts; but it appears from the accounts of travellers, that many among the lower claſſes of people cannot eaſily attain the latter ſpecies of merit: and in this inſtance, as in numberleſs others, the private intereſt of the individual corrects the errors of the legiſlator. Sir

[a] Eton's Turkiſh Emp. c. vii. p. 291. [b] Id. p. 280.

John

John Chardin ſays, that matrimony in Perſia is very expenſive, and that only men of eſtates will venture upon it, leſt it prove their ruin.[a] The Ruſſian travellers ſeem to confirm this account, and obſerve that the lower claſſes of people are obliged to defer marriage till late; and that it is only among the rich that this union takes place early.[b]

The dreadful convulſions to which Perſia has been continually ſubject for many hundred years muſt have been fatal to her agriculture. The periods of repoſe from external wars and internal commotions have been ſhort and few; and even during the times of profound peace, the frontier provinces have been conſtantly ſubject to the ravages of the Tartars.

The effect of this ſtate of things is ſuch as might be expected. The proportion of uncultivated to cultivated land in Perſia, Sir John Chardin ſtates to be ten to one;[c] and the mode in which the officers of the Shah and private owners let out their lands to huſbandmen is not that which is beſt calculated to reanimate induſtry. The grain in Perſia is beſides much ſubject to be de-

[a] Sir John Chardin's Travels. Harris's Collect. b. iii. c. ii. p. 870. [b] Découv. Ruſſ. tom. ii. p. 293.

[c] Chardin's Travels. Harris's Collect. b. iii. c. ii. p. 902.

ſtroyed

ſtroyed by hail, drought, locuſts, and other inſects,[a] which probably tends rather to diſcourage the employment of capital in the cultivation of the ſoil.

The plague does not extend to Perſia; but the ſmall-pox is mentioned by the Ruſſian travellers as making very fatal ravages.[b]

It will not be worth while to enter more minutely on the checks to Population in Perſia, as they ſeem to be nearly ſimilar to thoſe which have been juſt deſcribed in the Turkiſh dominions. The ſuperior deſtruction of the plague, in Turkey, is perhaps nearly balanced by the greater frequency of internal commotions in Perſia.

[a] Chardin's Travels. Harris's Collect, b. iii. c. ii. p. 902.
[b] Découv. Ruſſ. tom. ii. p. 377.

CHAP. XI.

Of the Checks to Population in Indoſtan and Tibet.

In the ordinances of Menu, the Indian legiſlator, which Sir Wm. Jones has tranſlated, and called the *Inſtitutes of Hindu Law*, marriage is very greatly encouraged, and a male heir is conſidered as an object of the firſt importance.

"By a ſon a man obtains victory over all "people; by a ſon's ſon he enjoys immortality; "and afterwards by the ſon of that grandſon "he reaches the ſolar abode."

"Since the ſon delivers his father from the "hell, named Put, he was therefore called "puttra, by Brahma himſelf."[a]

Among the different nuptial rites, Menu has aſcribed particular qualities to each.

[a] Sir Wm. Jones's Works, vol. iii. c. ix. p. 354. Speaking of the Indian laws, the Abbé Raynal ſays, "La population eſt "un devoir primitif, un ordre de la nature ſi ſacré, que la "loi permet de tromper, de mentir, de ſe parjurer pour favo-"riſer un marriage." Hiſt. des Indes, tom. i. l. i. p. 81. 8vo. 10 vols. Paris 1795.

"A ſon

" A ſon of a *Bráhmì*, or wife by the firſt " ceremony, redeems from ſin, if he perform " virtuous acts, ten anceſtors, ten deſcendants, " and himſelf, the twenty-firſt perſon."

" A ſon born of a wife by the *Daiva* nup- " tials redeems ſeven and ſeven, in higher and " lower degrees; of a wife by the *Arſha*, three " and three; of a wife by the *Prájápatya*, ſix " and ſix."[a]

A houſekeeper is conſidered as of the moſt eminent order. " The divine ſages, the manes, " the gods, the ſpirits, and gueſts, pray for be- " nefits to maſters of families."[b] An elder brother not married before the younger is mentioned among the perſons who are particularly to be ſhunned.[c]

Such ordinances would naturally cauſe marriage to be conſidered as a religious duty; yet it ſeems to be rather a ſucceſſion of male heirs, than a very numerous progeny, that is the object ſo much deſired.

" The father having begotten a ſon diſcharges " his debt to his own progenitors."

" That ſon alone by whoſe birth he diſcharges " the debt, and through whom he attains im-

[a] Sir Wm. Jones's Works, vol. iii. c. iii. p. 124.
[b] Id. p. 130. [c] Id. p. 141.

" immortality,

" mortality was begotten from a ſenſe of duty;
" all the reſt are conſidered by the wiſe as be-
" gotten from love of pleaſure.[a]"

A widow is on ſome occaſions allowed to have one ſon by the brother, or ſome appointed kinſman of the deceaſed huſband, but on no account a ſecond. " The firſt object of the " appointment being obtained according to law, " both the brother and the ſiſter muſt live to-" gether like a father and daughter by affi-" nity."[b]

In almoſt every part of the ordinances of Menu, ſenſuality of all kinds is ſtrongly reprobated, and chaſtity inculcated as a religious duty.

" A man by the attachment of his organs to " ſenſual pleaſures incurs certain guilt; but hav-" ing wholly ſubdued them he hence attains " heavenly bliſs."

" Whatever man may obtain all thoſe grati-" fications, or whatever man may reſign them " completely, the reſignation of all pleaſures is " far better than the attainment of them."[c]

It is reaſonable to ſuppoſe, that ſuch paſſages might, in ſome degree, tend to counteract thoſe

[a] Sir William Jones's Works, vol. iii. c. ix. P. 340.
[b] Id. p. 343. [c] Id. c. ii. p. 96.

encouragements to increaſe, which have been before mentioned; and might prompt ſome religious perſons to deſiſt from further indulgences, when they had obtained one ſon, or to remain more contented than they otherwiſe would have been in an unmarried ſtate. Strict and abſolute chaſtity ſeems indeed to ſuperſede the obligation of having deſcendants.

"Many thouſands of Brahmens having avoided ſenſuality from their early youth, and having left no iſſue in their families, have aſcended nevertheleſs to Heaven."

"And like thoſe abſtemious men, a virtuous wife aſcends to Heaven though ſhe have no child, if after the deceaſe of her lord ſhe devote herſelf to pious auſterity."[a]

The permiſſion to a brother or other kinſman to raiſe up an heir for the deceaſed huſband, which has been noticed, extends only to women of the ſervile claſs.[b] Thoſe of the higher claſſes are not even to pronounce the name of another man, but to

"Continue till death forgiving all injuries, performing harſh duties, avoiding every ſen-

[a] Sir William Jones's Works, vol. iii. c. v. p. 221.

[b] Id. c. ix. p. 343.

"ſual

"ſual pleaſure, and cheerfully practiſing the "incomparable rules of virtue."[a]

Beſide theſe ſtrict precepts relating to the government of the paſſions, other circumſtances would perhaps concur, to prevent the full effect of the ordinances which encourage marriage.

The diviſion of the people into claſſes, and the continuance of the ſame profeſſion in the ſame family, would be the means of pointing out to each individual, in a clear and diſtinct manner, his future proſpects reſpecting a livelihood; and from the gains of his father he would be eaſily enabled to judge, whether he could ſupport a family by the ſame employment. And though, when a man cannot gain a ſubſiſtence in the employments appropriate to his claſs, it is allowable for him, under certain reſtrictions, to ſeek it in another; yet ſome kind of diſgrace ſeems to attach to this expedient, and it is not probable, that many perſons would marry with the certain proſpect of being obliged thus to fall from their claſs, and to lower in ſo marked a manner their condition in life.

In addition to this, the choice of a wife ſeems

[a] Sir William Jones's Works, vol. iii. c. v. p. 221.

to be a point of conſiderable difficulty. A man might remain unmarried for ſome time, before he could find exactly ſuch a companion as the legiſlator preſcribes. Ten families of a certain deſcription, be they ever ſo great, or ever ſo rich in kine, goats, ſheep, gold, and grain, are ſtudiouſly to be avoided. Girls with too little or too much hair, who are too talkative, who have bad eyes, a diſagreeable name, or any kind of ſickneſs, who have no brother, or whoſe father is not well known, are all, with many others, excluded; and the choice will appear to be in ſome degree confined, when it muſt neceſſarily reſt upon

"A girl whoſe form has no defect; who has "an agreeable name; who walks gracefully, "like a phenicopteros, or a young elephant; "whoſe hair and teeth are moderate reſpec-"tively in quantity and ſize; whoſe body has "exquiſite ſoftneſs."[a]

It is obſerved, that a woman of the ſervile claſs is not mentioned, even in the recital of any ancient ſtory, as the wife of a Brahmen or of a Cſhatriya, though in the greateſt difficulty to find a ſuitable match; which ſeems to imply, that ſuch a difficulty might ſometimes occur.[b]

[a] Sir William Jones's Works, vol. iii. c. iii. p. 120.

[b] Id. p. 121.

Another

Another obſtacle to marriage ariſing from the Hindoo cuſtom is, that an elder brother who does not marry ſeems in a manner to confine all his other brothers to the ſame ſtate; for a younger brother who marries before the elder incurs diſgrace, and is mentioned among the perſons who ought to be ſhunned.[a]

The character which the legiſlator draws of the manners and diſpoſitions of the women in India is moſt extremely unfavourable. Among many other paſſages expreſſed with equal ſeverity, he obſerves, that,

"Through their paſſion for men, their mu-
"table temper, their want of ſettled affection,
"and their perverſe nature, (let them be guard-
"ed in this world ever ſo well), they ſoon be-
"come alienated from their huſbands."[b]

This character, if true, probably proceeded from their never being allowed the ſmalleſt degree of liberty,[c] and from the ſtate of degradation to which they were reduced by the practice of polygamy; but however this may be, ſuch paſſages tend ſtrongly to ſhow, that illicit intercourſe between the ſexes was frequent notwithſtanding the laws againſt adultery. Theſe laws

[a] Sir William Jones's Works, vol. iii. c. iii. p. 141.
[b] Id. c. ix. p. 337. [c] Id. c. v. p. 219.

are noticed as not relating to the wives of public dancers or ſingers, or of ſuch baſe men as lived by the intrigues of their wives;[a] a proof that theſe characters were not uncommon, and were to a certain degree permitted. Add to this, that the practice of polygamy[b] among the rich would ſometimes render it difficult for the lower claſſes of people to obtain wives; and this difficulty would probably fall particularly hard on thoſe, who were reduced to the condition of ſlaves.

From all theſe circumſtances combined, it ſeems probable, that among the checks to population in India the preventive check would have its ſhare; but from the prevailing habits and opinions of the people there is reaſon to believe, that the tendency to early marriages was ſtill always predominant, and in general prompted every perſon to enter into this ſtate, who could look forward to the ſlighteſt chance of being able to maintain a family. The natural conſequence of this was, that the lower claſſes of people were reduced to extreme poverty, and were compelled to adopt the moſt frugal and ſcanty mode of ſubſiſtence. This frugality was ſtill further in-

[a] Sir William Jones's Works, vol. iii. c. viii. p. 325.

[b] Id. c. ix. p. 346, 347.

creaſed

creaſed, and extended in ſome degree to the higher claſſes of ſociety, by its being conſidered as an eminent virtue.[a] The population would thus be preſſed hard againſt the limits of the means of ſubſiſtence, and the food of the country would be meted out to the major part of the people in the ſmalleſt ſhares that could ſupport life. In ſuch a ſtate of things every failure in the crops from unfavourable ſeaſons would be felt moſt ſeverely; and India, as might be expected, has in all ages been ſubject to the moſt dreadful famines.

A part of the ordinances of Menu is expreſsly dedicated to the conſideration of times of diſtreſs, and inſtructions are given to the different claſſes reſpecting their conduct during theſe periods. Brahmens pining with hunger and want are frequently mentioned;[b] and certain ancient and virtuous characters are deſcribed, who had done impure and unlawful acts, but who were conſidered by the legiſlator as juſtified on account of the extremities to which they were reduced.

"Ajigarta, dying with hunger, was going to "deſtroy his own ſon by ſelling him for ſome

[a] Sir William Jones's Works, vol. iii. c. iii. p. 133.

[b] Id. c. iv. p. 165. c. x. p. 397.

" cattle; yet he was guilty of no crime, for he
" only ſought a remedy againſt famiſhing."

" Vámadéva, who well knew right and
" wrong, was by no means rendered impure,
" though deſirous, when oppreſſed by hunger,
" of eating the fleſh of dogs."

" Viſwámitra too, than whom none knew
" better the diſtinctions between virtue and
" vice, reſolved when he was periſhing with
" hunger, to eat the haunch of a dog, which he
" had received from a *Chaudála*." [a]

If theſe great and virtuous men of the higheſt claſs, whom all perſons were under the obligation of aſſiſting, could be reduced to ſuch extremities, we may eaſily conjecture what muſt have been the ſufferings of the loweſt claſs.

Such paſſages clearly prove the exiſtence of ſeaſons of the moſt ſevere diſtreſs, at the early period when theſe ordinances were compoſed; and we have reaſon to think, that they have occurred at irregular intervals ever ſince. One of the Jeſuits ſays, that it is impoſſible for him to deſcribe the miſery, to which he was witneſs during the two years famine in 1737 and 1738; [b] but the deſcription which he gives of it, and of

[a] Sir William Jones's Works, vol. iii. c. x. p. 397, 398.

[b] Lettres Edif. tom. xiv. p. 178.

the

the mortality which it occaſioned, is ſufficiently dreadful without further detail. Another Jeſuit, ſpeaking more generally, ſays, "Every year we "baptize a thouſand children, whom their pa- "rents can no longer feed, or who, being likely "to die, are ſold to us by their mothers in order "to get rid of them."[a]

The poſitive checks to population would of courſe fall principally upon the Sudrá claſs, and thoſe ſtill more miſerable beings, who are the outcaſts of all the claſſes, and are not even ſuf- fered to live within the towns.[b]

On this part of the population the epidemics which are the conſequences of indigence and bad nouriſhment, and the mortality among young children, would neceſſarily make great ravages; and thouſands of theſe unhappy wretches would probably be ſwept off in a pe- riod of ſcarcity, before any conſiderable degree of want had reached the middle claſſes of the ſociety. The Abbé Raynal ſays, on what au- thority I know not, that, when the crops of rice fail, the huts of theſe poor outcaſts are ſet on fire, and the flying inhabitants ſhot by the pro-

[a] Lettres Edif. tom. xiv. p. 284.

[b] Sir William Jones's Works, vol. iii. c. x. p. 390.

prietors

prietors of the grounds, that they may not conſume any part of the produce.[a]

The difficulty of rearing a family even among the middle and higher claſſes of ſociety, or the fear of ſinking from their caſt, has driven the people in ſome parts of India, to adopt the moſt cruel expedients to prevent a numerous offspring. In a tribe on the frontiers of Junapore, a diſtrict of the province of Benares, the practice of deſtroying female infants has been fully ſubſtantiated. The mothers were compelled to ſtarve them. The reaſon that the people gave for this cruel practice was the great expenſe of procuring ſuitable matches for their daughters. One village only furniſhed an exception to this rule, and in that village ſeveral old maids were living.

It will naturally occur, that the race could not be continued upon this principle; but it appeared, that the particular exceptions to the general rule, and the intermarriages with other tribes were ſufficient for this purpoſe. Our Eaſt India Company obliged theſe people to enter into an engagement not to continue this inhuman practice.[b]

On the coaſt of Malabar the Nayrs do not

[a] Hiſt. des Indes, tom. i. liv. i. p. 97. 8vo. 10 vols. Paris, 1795. [b] Aſiatic Reſearches, vol. iv. p. 354.

enter into regular marriages, and the right of inheritance and ſucceſſion reſts in the mother of the brother, or otherwiſe goes to the ſiſter's ſon, the father of the child being always conſidered as uncertain.

Among the Brahmens, when there are more brothers than one, only the elder or eldeſt of them marries. The brothers who thus maintain celibacy cohabit with Nayr women without marriage in the way of the Nayrs. If the eldeſt brother has not a ſon, then the next brother marries.

Among the Nayrs, it is the cuſtom for one Nayr woman to have attached to her two males, or four, or perhaps more.

The lower caſts, ſuch as carpenters, ironſmiths, and others, have fallen into the imitation of their ſuperiors, with this difference, that the joint concern in one woman is confined to brothers and male relations by blood, to the end that no alienation may take place in the courſe of the ſucceſſion.[a]

Monteſquieu takes notice of this cuſtom of the Nayrs on the coaſt of Malabar, and accounts for it on the ſuppoſition, that it was adopted in order to weaken the family ties of this caſt, that

[a] Aſiatic Reſearches, vol. v. p. 14.

as

as ſoldiers they might be more at liberty to follow the calls of their profeſſion; but I ſhould think, that it originated more probably in a fear of the poverty ariſing from a large family, particularly as the cuſtom ſeems to have been adopted by the other claſſes.[a]

In Tibet, according to Turner's late account of it, a cuſtom of this kind prevails generally. Without pretending abſolutely to determine the queſtion of its origin, Mr. Turner leans to the ſuppoſition, that it aroſe from the fear of a population too great for an unfertile country. From travelling much in the eaſt he had probably been led to obſerve the effects neceſſarily reſulting from an overflowing population, and is in conſequence one among the very few writers, who ſee theſe effects in their true light. He expreſſes himſelf very ſtrongly on this ſubject, and, in reference to the cuſtom above mentioned, ſays, "It certainly appears, that a ſuperabundant "population in an unfertile country muſt be the "greateſt of all calamities, and produce eternal "warfare, or eternal want. Either the moſt "active and the moſt able part of the commu-"nity muſt be compelled to emigrate, and to

[a] Eſprit des Loix, liv. xvi. c. 5.

"become

" becomes ſoldiers of fortune, or merchants of " chance; or elſe, if they remain at home, be " liable to fall a prey to famine in conſequence " of ſome accidental failure in their ſcanty " crops. By thus linking whole families to- " gether in the matrimonial yoke, the too rapid " increaſe of population was perhaps checked, " and an alarm prevented capable of pervading " the moſt fertile region upon the earth, and of " giving birth to the moſt inhuman and unna- " tural practice, in the richeſt, the moſt produc- " tive, and the moſt populous country in the " world. I allude to the empire of China, " where a mother, not foreſeeing the means of " raiſing or providing for a numerous family, " expoſes her new-born infant to periſh in the " fields; a crime, however odious, by no means " I am aſſured unfrequent." [a]

In almoſt every country of the globe individuals are compelled by conſiderations of private intereſt to habits, which tend to repreſs the natural increaſe of population; but Tibet is perhaps the only country, where theſe habits are univerſally encouraged by the government, and where to repreſs rather than to encourage population ſeems to be a public object.

[a] Turner's Embaſſy to Tibet, part ii. c. x. p. 351.

In

In the firſt career of life the Bootea is recommended to diſtinction by a continuance in a ſtate of celibacy; as on the contrary any matrimonial contract proves almoſt a certain hindrance to his riſe in rank, or his advancement to offices of political importance. Population is thus oppoſed by the two powerful bars of ambition and religion; and the higher orders of men, entirely engroſſed by political or eccleſiaſtical duties, leave to the huſbandman and labourer, to thoſe who till the fields and live by their induſtry, the excluſive charge of propagating the ſpecies.[a]

Hence a religious retirement is frequent,[b] and the number of monaſteries and nunneries is conſiderable. The ſtricteſt laws exiſt to prevent a woman from accidentally paſſing a night within the limits of the one, or a man within thoſe of the other; and a regulation is framed completely to obviate abuſe, and eſtabliſh reſpect towards the ſacred orders of both ſexes.

The nation is divided into two diſtinct and ſeparate claſſes, thoſe who carry on the buſineſs of the world, and thoſe who hold intercourſe with Heaven. No interference of the laity ever

[a] Turner's Embaſſy, part ii. c. i. p. 172. [b] Ibid.

interrupts

interrupts the regulated duties of the clergy. The latter, by mutual compact, take charge of all ſpiritual concerns; and the former by their labours enrich and populate the ſtate.[a]

But even among the laity the buſineſs of population goes on very coldly. All the brothers of a family, without any reſtriction of age or of numbers, aſſociate their fortunes with one female, who is choſen by the eldeſt, and conſidered as the miſtreſs of the houſe; and whatever may be the profits of their ſeveral purſuits, the reſult flows into the common ſtore.[b]

The number of huſbands is not apparently defined, or reſtricted within any limits. It ſometimes happens, that in a ſmall family there is but one male; and the number, Mr. Turner ſays, may ſeldom exceed that which a native of rank at Teſhoo Loomboo pointed out to him in a family reſident in the neighbourhood, in which five brothers were then living together very happily with one female under the ſame connubial compact. Nor is this ſort of league confined to the lower ranks of people alone, it is found alſo frequently in the moſt opulent families.[c]

[a] Turner's Embaſſy, part ii, c. viii. p. 312.
[b] Id. c. x. p. 348. 350. [c] Id p. 349.

It

It is evident that this cuſtom, combined with the celibacy of ſuch a numerous body of eccleſiatics, muſt operate in the moſt powerful manner as a preventive check to population. Yet, notwithſtanding this exceſſive check, it would appear from Mr. Turner's account of the natural ſterility of the ſoil, that the population is kept up to the level of the means of ſubſiſtence; and this ſeems to be confirmed by the number of beggars in Teſhoo Loomboo. On theſe beggars, and the charity which feeds them, Mr. Turner's remark, though common, is yet ſo juſt and important, that it cannot be too often repeated.

"Thus I unexpectedly diſcovered," he ſays, "where I had conſtantly ſeen the round of life "moving in a tranquil regular routine, a maſs of "indigence and idleneſs, of which I had no idea. "But yet it by no means ſurpriſed me, when "I conſidered, that, wherever indiſcriminate "charity exiſts, it will never want objects on "which to exerciſe its bounty, but will always "attract expectants more numerous than it has "the means to gratify. No human being can "ſuffer want at Teſhoo Loomboo. It is on "this humane diſpoſition, that a multitude even "of Muſſelmen, of a frame probably the largeſt

"and

" and moſt robuſt in the world, place their re-
" liance for the mere maintenance of a feeble
" life; and beſide theſe, I am informed, that
" no leſs than three hundred Hindoos, Goſeins,
" and Sunniaſſes, are daily fed at this place by
" the Lama's bounty."[a]

[a] Turner's Embaſſy, part ii. c. ix. p. 330.

CHAP. XII.

Of the Checks to Population in China and Japan.

THE account which has lately been given of the population of China is ſo extraordinary, as to ſtartle the faith of many readers, and tempt them to ſuppoſe, either that ſome accidental error muſt have crept into the calculations from an ignorance of the language; or that the mandarin, who gave Sir George Staunton the information, muſt have been prompted by a national pride, which is common every where, but is particularly remarkable in China, to exaggerate the power and reſources of his country. It muſt be allowed, that neither of theſe circumſtances is very improbable; at the ſame time it will be found, that the ſtatement of Sir George Staunton does not very eſſentially differ from other accounts of good authority; and, ſo far from involving any contradiction, is rendered probable by a reference to thoſe deſcriptions of the fertility of China, in which all the writers who have viſited the country agree.

According

According to Duhalde, in the poll made at the beginning of the reign of Kang-hi, there were found 11,052,872 families, and 59,788,364 men able to bear arms; and yet neither the princes, nor the officers of the court, nor the mandarins, nor the ſoldiers who had ſerved and been diſcharged; nor the literati, the licentiates, the doctors, the bonzas, nor young perſons under twenty years of age; nor the great multitudes living either on the ſea or on rivers in barks, are comprehended in this number.[a]

The proportion which the number of men of a military age bears to the whole population of any country is generally eſtimated as 1 to 4. If we multiply 59,788,364 by 4, the reſult will be 239,153,456; but in the general calculations on this ſubject, a youth is conſidered as capable of bearing arms before he is twenty. We ought therefore to have multiplied by a higher number. The exceptions to the poll ſeem to include almoſt all the ſuperior claſſes of ſociety, and a very great number among the lower. When all theſe circumſtances are taken into conſideration, the whole population, according to Duhalde, will not appear to fall very ſhort of

[a] Duhalde's Hiſt. of China, 2 vols. folio, 1738. vol. i. p. 244.

the 333,000,000 mentioned by Sir George Staunton.[a]

The ſmall number of families, in proportion to the number of perſons able to bear arms, which is a ſtriking part of this ſtatement of Duhalde, is accounted for by a cuſtom noticed by Sir George Staunton as general in China. In the encloſure belonging to one dwelling, he obſerves, that a whole family of three generations, with all their reſpective wives and children, will frequently be found. One ſmall room is made to ſerve for the individuals of each family, ſleeping in different beds, divided only by mats hanging from the ceiling. One common room is uſed for eating.[b] In China there is beſides a prodigious number of ſlaves,[c] who will of courſe be reckoned as part of the families to which they belong. Theſe two circumſtances may perhaps be ſufficient, to account for what at firſt appears to be a contradiction in the ſtatement.

To account for this population, it will not be neceſſary to recur to the ſuppoſition of Monteſquieu, that the climate of China is in any peculiar manner favourable to the production of children, and that the women are more prolific

[a] Embaſſy to China, vol. ii. Appen. p. 615. 4to.
[b] Id. p. 155. [c] Duhalde's China, vol. i. p. 278.

than

than in any other part of the world.[a] The cauſes, which have principally contributed to produce this effect, appear to be the following:

Firſt, the excellence of the natural ſoil, and its advantageous poſition in the warmeſt parts of the temperate zone, a ſituation the moſt favourable to the productions of the earth. Duhalde has a long chapter on the plenty which reigns in China, in which he obſerves, that almoſt all that other kingdoms afford may be found in China; but that China produces an infinite number of things, which are to be found no where elſe. This plenty, he ſays, may be attributed as well to the depth of the ſoil, as to the painful induſtry of its inhabitants, and the great number of lakes, rivers, brooks, and canals, wherewith the country is watered.[b]

Secondly, The very great encouragement that from the beginning of the monarchy has been given to agriculture, which has directed the labours of the people to the production of the greateſt poſſible quantity of human ſubſiſtence. Duhalde ſays, that what makes theſe people undergo ſuch incredible fatigues in cultivating the earth is not barely their private intereſt, but

[a] Eſprit des Loix, liv. viii. c. xxi.

[b] Duhalde's China, vol. i. p. 314.

rather the veneration paid to agriculture, and the eſteem which the emperors themſelves have always had for it, from the commencement of the monarchy. One emperor of the higheſt reputation was taken from the plough to ſit on the throne. Another found out the art of draining water from ſeveral low countries, which were till then covered with it, of conveying it in canals to the ſea, and of uſing theſe canals to render the ſoil fruitful.[a] He beſides wrote ſeveral books on the manner of cultivating land, by dunging, tilling, and watering it. Many other emperors expreſſed their zeal for this art, and made laws to promote it; but none raiſed its eſteem to a higher pitch than Ven-ti, who reigned 179 years before Chriſt. This prince, perceiving that his country was ruined by wars, reſolved to engage his ſubjects to cultivate their lands, by the example of ploughing with his own hands the land belonging to his palace, which obliged all the miniſters and great men of his court to do the ſame.[b]

A great feſtival, of which this is thought to be the origin, is ſolemnized every year in all the cities of China on the day that the ſun enters the fifteenth degree of Aquarius, which the Chi-

[a] Duhalde's China, vol. i. p. 274. [b] Id. p. 275.

neſe

neſe conſider as the beginning of their ſpring. The emperor goes himſelf in a ſolemn manner to plough a few ridges of land, in order to animate the huſbandman by his own example; and the mandarins of every city perform the ſame ceremony.[a] Princes of the blood and other illuſtrious perſons hold the plough after the emperor, and the ceremony is preceded by the ſpring ſacrifice, which the emperor as chief pontiff offers to Shang-ti, to procure plenty in favour of his people.

The reigning emperor in the time of Duhalde, celebrated this feſtival with extraordinary ſolemnity, and in other reſpects ſhowed an uncommon regard for huſbandmen. To encourage them in their labours, he ordered the governors of all the cities to ſend him notice every year of the perſon in this profeſſion, in their reſpective diſtricts, who was moſt remarkable for his application to agriculture, for unblemiſhed reputation, for preſerving union in his own family, and peace with his neighbours, and for his frugality and averſion to all extravagance.[b] The mandarins in their different provinces encourage with honours the vigilant cultivator,

[a] Duhalde's China, vol. i. p. 275. [b] Id. p. 276.

and ſtigmatize with diſgrace the man whoſe lands are neglected.[a]

In a country in which the whole of the government is of the patriarchal kind, and the emperor is venerated as the father of his people and the fountain of inſtruction, it is natural to ſuppoſe, that theſe high honours paid to agriculture would have a powerful effect. In the gradations of rank, they have raiſed the huſbandman above the merchant or mechanic,[b] and the great object of ambition among the lower claſſes is in conſequence to become poſſeſſed of a ſmall portion of land. The number of manufacturers bears but a very inconſiderable proportion to that of huſbandmen in China;[c] and the whole ſurface of the empire is, with trifling exceptions, dedicated to the production of food for man alone. There is no meadow, and very little paſture; neither are the fields cultivated in oats, beans, or turnips, for the ſupport of cattle of any kind. Little land is taken up for roads, which are few and narrow, the chief communication being by water. There are no commons or lands ſuffered to lie waſte by the neglect, or the caprice, or for the ſport of great proprietors.

[a] Lettres Edif. tom. xix. p. 132. [b] Duhalde's China, vol. i. p. 272. [c] Embaſſy to China, Staunton, vol. ii. p. 544.

No

No arable land lies fallow. The ſoil under a hot and fertilizing ſun yields annually in moſt inſtances double crops, in conſequence of adapting the culture to the ſoil, and of ſupplying its defects by mixture with other earths, by manure, by irrigation, and by careful and judicious induſtry of every kind. The labour of man is little diverted from that induſtry, to miniſter to the luxuries of the opulent and powerful, or in employments of no real uſe. Even the ſoldiers of the Chineſe army, except during the ſhort intervals of the guards which they are called upon to mount, or the exerciſes or other occaſional ſervices which they perform, are moſtly employed in agriculture. The quantity of ſubſiſtence is increaſed alſo by converting more ſpecies of animals and vegetables to that purpoſe, than is uſual in other countries.[a]

This account, which is given by Sir George Staunton, is confirmed by Duhalde and the other Jeſuits; who agree in deſcribing the perſevering induſtry of the Chineſe, in manuring, cultivating, and watering their lands, and their ſucceſs in producing a prodigious quantity of

[a] Embaſſy to China, Staunton, vol. ii. p. 545.

human

human ſubſiſtence.[a] The effect of ſuch a ſyſtem of agriculture on population muſt be obvious.

Laſtly, The extraordinary encouragements that have been given to marriage, which have cauſed the immenſe produce of the country to be divided into very ſmall ſhares, and have conſequently rendered China more populous in proportion to its means of ſubſiſtence, than perhaps any other country in the world.

The Chineſe acknowledge two ends in marriage,[b] the firſt is, that of perpetuating the ſacrifices in the temple of their fathers; and the ſecond, the multiplication of the ſpecies. Duhalde ſays, that the veneration and ſubmiſſion of children to parents, which is the grand principle of their political government, continues even after death, and that the ſame duties are paid to them as if they were living. In conſequence of theſe maxims, a father feels ſome ſort of diſhonour, and is not eaſy in his mind, if he do not marry off all his children; and an elder brother, though he inherit nothing from his

[a] Duhalde, chapter on agriculture, vol. i. p. 272; chapter on plenty, p. 314.

[b] Lettres Edif. et Curieuſes, tom. xxiii. p. 448.

father,

father, muſt bring up the younger children and marry them, leſt the family ſhould become extinct, and the anceſtors be deprived of the honours and duties they are entitled to from their deſcendants.[a]

Sir George Staunton obſerves, that whatever is ſtrongly recommended, and generally practiſed, is at length conſidered as a kind of religious duty; and that the marriage union as ſuch takes place in China, wherever there is the leaſt proſpect of ſubſiſtence for a future family. This proſpect however is not always realized, and the children are then abandoned by the wretched authors of their being;[b] but even this permiſſion given to parents thus to expoſe their offſpring tends undoubtedly to facilitate marriage, and encourage population. Contemplating this extreme reſource beforehand, leſs fears are entertained of entering into the married ſtate, and the parental feelings will always ſtep forwards, to prevent a recurrence to it, except under the moſt dire neceſſity. Marriage with the poor is beſides a meaſure of prudence, becauſe the children, particularly the ſons, are bound to maintain their parents.[c]

[a] Duhalde's China, vol. i. p. 303. [b] Embaſſy to China, vol. ii. p. 157. [c] Ibid.

The

The effect of theſe encouragements to marriage among the rich is to ſubdivide property, which has in itſelf a ſtrong tendency to promote population. In China there is leſs inequality in the fortunes than in the conditions of men. Property in land has been divided into very moderate parcels, by the ſucceſſive diſtribution of the poſſeſſions of every father equally among his ſons. It would rarely happen, that there was but one ſon to enjoy the whole property of his deceaſed parents; and from the general prevalence of early marriages, this property would not often be increaſed by collateral ſucceſſion.[a] Theſe cauſes conſtantly tend to level wealth; and few ſucceed to ſuch an accumulation of it, as to render them independent of any efforts of their own for its increaſe. It is a common remark among the Chineſe, that fortunes ſeldom continue conſiderable in the ſame family beyond the third generation.[b]

The effect of the encouragements to marriage on the poor is to keep the reward of labour as low as poſſible, and conſequently to preſs them down to the moſt abject ſtate of poverty. Sir George Staunton obſerves, that the price of

[a] Embaſſy to China, Staunton, vol. ii. p. 151.
[b] Id. p. 152.

labour

labour is generally found to bear as ſmall a proportion every where to the rate demanded for proviſions, as the common people can ſuffer; and that, notwithſtanding the advantage of living together in large families, like ſoldiers in a meſs, and the exerciſe of the greateſt economy in the management of theſe meſſes, they are reduced to the uſe of vegetable food, with a very rare and ſcanty reliſh of any animal ſubſtance.[a]

Duhalde, after deſcribing the painful induſtry of the Chineſe, and the ſhifts and contrivances unknown in other countries, to which they have recourſe in order to gain a ſubſiſtence, ſays, "yet it muſt be owned, that, notwithſtanding the great ſobriety and induſtry of the inhabitants of China, the prodigious number of them occaſions a great deal of miſery. There are ſome ſo poor, that, being unable to ſupply their children with common neceſſaries, they expoſe them in the ſtreets."***** "In the great cities, ſuch as Pekin and Canton, this ſhocking ſight is very common."[b]

The Jeſuit, Premare, writing to a friend of the ſame ſociety, ſays, "I will tell you a fact,

[a] Embaſſy to China, Staunton, vol. ii. p. 156.

[b] Duhalde's China, vol. i. p. 277.

"which

" which may appear to be a paradox,* but is " nevertheleſs ſtrictly true. It is, that the rich- " eſt and moſt flouriſhing empire of the world " is notwithſtanding, in one ſenſe, the pooreſt " and the moſt miſerable of all. The country, " however extenſive and fertile it may be, is " not ſufficient to ſupport its inhabitants. Four " times as much territory would be neceſſary to " place them at their eaſe. In Canton alone, " there is, without exaggeration, more than a " million of ſouls, and in a town three or four " leagues diſtant, a ſtill greater number. Who " then can count the inhabitants of this pro- " vince? But what is this to the whole empire, " which contains fifteen great provinces all " equally peopled. To how many millions " would ſuch a calculation amount. A third " part of this infinite population would hardly " find ſufficient rice to ſupport itſelf properly.

" It is well known, that extreme miſery im- " pels people to the moſt dreadful exceſſes. A " ſpectator in China, who examines things " cloſely, will not be ſurpriſed, that mothers " deſtroy or expoſe many of their children; " that parents ſell their daughters for a trifle; " that the people ſhould be intereſted; and

* Lettres Edif. et Curieuſes, tom. xvi. p. 394.

" that

"that there ſhould be ſuch a number of rob-
"bers. The ſurpriſe is, that nothing ſtill more
"dreadful ſhould happen; and that in the times
"of famine, which are here but too frequent,
"millions of people ſhould periſh with hunger,
"without having recourſe to thoſe dreadful ex-
"tremities, of which we read examples in the
"hiſtories of Europe.

"It cannot be ſaid in China, as in Europe,
"that the poor are idle, and might gain a ſub-
"ſiſtence, if they would work. The labours
"and efforts of theſe poor people are beyond
"conception. A Chineſe will paſs whole days
"in digging the earth, ſometimes up to his
"knees in water, and in the evening is happy
"to eat a little ſpoonful of rice, and to drink
"the inſipid water in which it was boiled.
"This is all that they have in general."[a]

A great part of this account is repeated in Duhalde; and, even allowing for ſome exaggeration, it ſhows in a ſtrong point of view to what degree population has been forced in China, and the wretchedneſs which has been the conſequence of it. The population which has ariſen naturally from the fertility of the ſoil, and the encouragements to agriculture, may be

[a] Lettres Edif. et Curieuſes, tom. xvi. p. 394, et ſeq.

conſidered

conſidered as genuine and deſirable; but all that has been added by the encouragements to marriage has not only been an addition of ſo much pure miſery in itſelf, but has completely interrupted the happineſs, which the reſt might have enjoyed.

The territory of China is eſtimated at about eight times the territory of France.[a] Taking the population of France only at 26 millions, eight times that number will give 208,000,000; and when the three powerful cauſes of population, which have been ſtated, are conſidered, it will not appear incredible, that the population of China ſhould be to the population of France, according to their reſpective ſuperficies, as 333 to 208, or a little more than 3 to 2.

The natural tendency to increaſe is every where ſo great, that it will generally be eaſy to account for the height, at which the population is found in any country. The more difficult as well as the more intereſting part of the inquiry is, to trace the immediate cauſes, which ſtop its further progreſs. The procreative power would, with as much facility, double in twenty-five years the population of China, as that of any of the ſtates of America; but we know

[a] Embaſſy to China, Staunton, vol. ii. p. 546.

that

that it cannot do this, from the palpable inability of the ſoil to ſupport ſuch an additional number. What then becomes of this mighty power in China? And what are the kinds of reſtraint, and the forms of premature death, which keep the population down to the level of the means of ſubſiſtence?

Notwithſtanding the extraordinary encouragements to marriage in China, we ſhould perhaps be led into an error, if we were to ſuppoſe, that the preventive check to population does not operate. Duhalde ſays, that the number of bonzas is conſiderably above a million, of which there are two thouſand unmarried at Pekin, beſide three hundred and fifty thouſand more in their temples eſtabliſhed in different places by the emperor's patents, and that the literary bachelors alone are about ninety thouſand.[a]

The poor, though they would probably always marry when the ſlighteſt proſpect opened to them of being able to ſupport a family, and, from the permiſſion of infanticide, would run great riſks in this reſpect; yet they would undoubtedly be deterred from entering into this ſtate, under the certainty of being obliged to

[a] Duhalde's China, vol. i, p. 244.

expoſe all their children, or to ſell themſelves and families as ſlaves; and from the extreme poverty of the lower claſſes of people, ſuch a certainty would often preſent itſelf. But it is among the ſlaves themſelves, of which, according to Duhalde, the miſery in China produces a prodigious multitude, that the preventive check to population principally operates. A man ſometimes ſells his ſon, and even himſelf and wife, at a very moderate price. The common mode is, to mortgage themſelves with a condition of redemption, and a great number of men and maid ſervants are thus bound in a family.[a] Hume, in ſpeaking of the practice of ſlavery among the ancients, remarks very juſtly, that it will generally be cheaper to buy a full-grown ſlave, than to rear up one from a child. This obſervation appears to be particularly applicable to the Chineſe. All writers agree in mentioning the frequency of the dearths in China, and, during theſe periods, it is probable that ſlaves would be ſold in great numbers for little more than a bare maintenance. It could

[a] Id. p. 278. La miſère et le grand nombre d'habitants de l'empire y cauſent cette multitude prodigeuſe d'eſclaves: preſque tous les valets, et généralement toutes les filles de ſervice d'une maiſon ſont eſclaves. Lettres Edif. tom xix, p. 145.

very

very rarely therefore anſwer to the maſter of a family, to encourage his ſlaves to breed; and we may ſuppoſe, in conſequence, that a great part of the ſervants in China, as in Europe, remain unmarried.

The check to population, ariſing from a vicious intercourſe with the ſex, does not appear to be very conſiderable in China. The women are ſaid to be modeſt and reſerved, and adultery is rare. Concubinage is however generally practiſed, and in the large towns publick women are regiſtered; but their number is not great, being proportioned, according to Sir George Staunton, to the ſmall number of unmarried perſons, and of huſbands abſent from their families.[a]

The poſitive checks to population from diſeaſe, though conſiderable, do not appear to be ſo great as might be expected. The climate is in general extremely healthy. One of the miſſionaries goes ſo far as to ſay, that plagues or epidemic diſorders are not ſeen once in a century;[b] but this is undoubtedly an error, as they are mentioned by others as if they were by no means ſo infrequent. In ſome inſtructions to

[a] Embaſſy to China, vol. ii, p. 157.

[b] Lettres Edif. tom. xxii, p. 187.

mandarins, relating to the burying of the poor, who have in general no regular places of ſepulture, it is obſerved, that when epidemic diſeaſes prevail, the roads are found covered with bodies ſufficient to infect the air to a great diſtance;[a] and the expreſſion of years of contagion[b] occurs ſoon after, in a manner which ſeems to imply, that they are not uncommon. On the firſt and fifteenth day of every month the mandarins aſſemble, and give their people a long diſcourſe, wherein every governor acts the part of a father who inſtructs his family.[c] In one of theſe diſcourſes, which Duhalde produces, the following paſſage occurs: "Beware of thoſe "years which happen from time to time, when "epidemic diſtempers, joined to a ſcarcity of "corn, make all places deſolate. Your duty is "then to have compaſſion on your fellow ci-"tizens, and aſſiſt them with whatever you "can ſpare."[d]

It is probable that the epidemics, as is uſually the caſe, fall ſeverely on the children. One of the Jeſuits, ſpeaking of the number of infants whom the poverty of their parents condemns to death the moment that they are born, writes thus:

[a] Lettres Edif. tom. xix, p. 126.
[b] Id. p. 127.
[c] Duhalde's China, vol. i, p. 254.
[d] Id. 256.

"There

"There is ſeldom a year, in which the churches "at Pekin do not reckon five or ſix thouſand "of theſe children purified by the waters of "baptiſm. This harveſt is more or leſs abund-"ant, according to the number of catechiſts "which we can maintain. If we had a ſuf-"ficient number, their cares need not be con-"fined alone to the dying infants that are ex-"poſed. There would be other occaſions for "them to exerciſe their zeal, particularly at "certain times of the year, when the ſmall-"pox or epidemic diſorders carry off an in-"credible number of children."[a] It is indeed almoſt impoſſible to ſuppoſe, that the extreme indigence of the lower claſſes of people ſhould not produce diſeaſes, that would be fatal to a conſiderable part of thoſe children, whom their parents might attempt to rear in ſpite of every difficulty.

Reſpecting the number of infants which are actually expoſed, it would be difficult to form the ſlighteſt gueſs; but, if we believe the Chineſe writers themſelves, the practice muſt be very common. Attempts have been made at different times by the government to put a ſtop to it, but always without ſucceſs. In a book of

[a] Lettres Edif. tom. xix, p. 100.

inſtructions before alluded to, written by a mandarin celebrated for his humanity and wiſdom, a propoſal is made for the eſtabliſhment of a foundling hoſpital in his diſtrict, and an account is given of ſome ancient eſtabliſhments of the ſame kind,[a] which appear to have fallen into diſuſe. In this book the frequency of the expoſure of children, and the dreadful poverty which prompts it, are particularly deſcribed. "We ſee," he ſays, "people ſo poor, that they cannot furniſh the nouriſhment neceſſary for their own children. It is on this account, that they expoſe ſo great a number. In the metropolis, in the capitals of the provinces, and in the places of the greateſt commerce, their number is the moſt conſiderable; but many are found in parts that are leſs frequented, and even in the country. As the houſes in towns are more crowded together, the practice is more obvious; but every where theſe poor unfortunate infants have need of aſſiſtance."[b]

In the ſame work, part of an edict to prevent the drowning of children runs thus: "When "the tender offspring juſt produced is thrown "without pity into the waves, can it be ſaid, "that the mother has given, or that the child

[a] Lettres Edif. tom. xix, p. 110. [b] Id. p. 111.

"has

" has received life, when it is loſt as ſoon as it " is begun to be enjoyed? The poverty of the " parents is the cauſe of this crime. They have " hardly enough to ſupport themſelves, much " leſs are they able to pay a nurſe, and provide " for the expenſes neceſſary for the ſupport of " their children. This drives them to deſpair, " and not being able to bring themſelves to " ſuffer two people to die, that one may " live, the mother, to preſerve the life of her " huſband, conſents to ſacrifice her child. It " coſts much, however, to the parental feelings, " but the reſolution is ultimately taken, and " they think, that they are juſtified in diſpoſing " of the life of their child to prolong their own. " If they expoſed their children in a ſecret " place, the babe might work upon their com- " paſſion with its cries. What do they do " then? They throw it into the current of the " river, that they may loſe ſight of it immedi- " ately, and take from it at once all chance of " life."[a]

Such writings appear to be moſt authentic documents reſpecting the general prevalence of infanticide.

Sir George Staunton has ſtated, from the beſt

[a] Lettres Edif. tom. xix, p. 124.

information which he could collect, that the number of children expoſed annually at Pekin is about two thouſand;[a] but it is highly probable, that the number varies extremely from year to year, and depends very much upon ſeaſons of plenty or ſeaſons of ſcarcity. After any great epidemic or deſtructive famine, the number is probably very ſmall; it is natural, that it ſhould increaſe gradually on the return to a crowded population; and it is without doubt the greateſt, when an unfavourable ſeaſon takes place, at a period in which the average produce is already inſufficient to ſupport the overflowing multitude.

Theſe unfavourable ſeaſons do not appear to be infrequent, and the famines which follow them are perhaps the moſt powerful of all the poſitive checks to the Chineſe population; though at ſome periods the checks from wars and internal commotions have not been inconſiderable.[b] In the annals of the Chineſe monarchs, famines are often mentioned;[c] and it is not probable, that they would find a place among the moſt important events and revolutions of the empire,

[a] Embaſſy to China, vol. ii, p. 159. [b] Annals of the Chineſe Monarchs. Duhalde's China, vol. i, p. 136.

[c] Ibid.

if

if they were not deſolating and deſtructive to a great degree.

One of the Jeſuits remarks, that the occaſions when the mandarins pretend to ſhow the greateſt compaſſion for the people are, when they are apprehenſive of a failure in the crops, either from drought, from exceſſive rains, or from ſome other accident, ſuch as a multitude of locuſts, which ſometimes overwhelms certain provinces.[a] The cauſes here enumerated are probably thoſe, which principally contribute to the failure of the harveſts in China; and the manner in which they are mentioned ſeems to ſhow, that they are not uncommon.

Meares ſpeaks of violent hurricanes, by which whole harveſts are diſſipated, and a famine follows. From a ſimilar cauſe, he ſays, accompanied by exceſſive drought, a moſt dreadful dearth prevailed in 1787 throughout all the ſouthern provinces of China, by which an incredible number of people periſhed. It was no uncommon thing at Canton, to ſee the famiſhed wretch breathing his laſt, while mothers thought it a duty to deſtroy their infant children, and the young to give the ſtroke of fate to the

[a] Lettres Edif. tom. xix, p. 154.

aged

aged, to ſave them from the agonies of ſuch a dilatory death.[a]

The Jeſuit Parennin, writing to a member of the Royal Academy of Sciences, ſays, "another "thing that you can ſcarcely believe is, that "dearths ſhould be ſo frequent in China;"[b] and in the concluſion of his letter he remarks, that, if famine did not, from time to time, thin the immenſe number of inhabitants which China contains, it would be impoſſible for her to live in peace.[c] The cauſes of theſe frequent famines he endeavours to inveſtigate, and begins by obſerving very juſtly, that in a time of dearth China can obtain no aſſiſtance from her neighbours, and muſt neceſſarily draw the whole of her reſources from her own provinces.[d] He then deſcribes the delays and artifices, which often defeat the emperor's intentions to aſſiſt, from the public granaries, thoſe parts of the country which are the moſt diſtreſſed. When a harveſt fails in any province, either from exceſſive drought or a ſudden inundation, the great mandarins have recourſe to the public granaries; but often find them empty, owing to the diſhoneſty of the inferior mandarins, who have the

[a] Meares's Voyage, ch. vii, p. 92. [b] Lettres Edif. et Curieuſes, tom. xxii, p. 174. [c] Id. p. 186. [d] Id. p. 175.

charge

charge of them. Examinations and reſearches are then made, and an unwillingneſs prevails to inform the court of ſuch diſagreeable intelligence. Memorials are however at length preſented. Theſe memorials paſs through many hands, and do not reach the emperor till after many days. The great officers of ſtate are then ordered to aſſemble, and to deliberate on the means of relieving the miſery of the people. Declarations full of expreſſions of compaſſion for the people are in the mean time publiſhed throughout the empire. The reſolution of the tribunal is at length made known; but numberleſs other ceremonies delay its execution; while thoſe who are ſuffering have time to die with hunger, before the remedy arrives. Thoſe who do not wait for this laſt extremity crawl as well as they can into other diſtricts, where they hope to get ſupport, but leave the greateſt part of their number dead on the road.[a]

If, when a dearth occurs, the court do not make ſome attempt to relieve the people, ſmall parties of plunderers ſoon collect, and their numbers increaſe by degrees, ſo as to interrupt the tranquillity of the province. On this ac-

[a] Lettres Edif. tom. xxii, p. 180.

count

count numerous orders are always given, and movements are continually taking place, to amuſe the people till the famine is over; and as the motives to relieve the people are generally rather reaſons of ſtate than genuine compaſſion, it is not probable, that they ſhould be relieved at the time, and in the manner, that their wants require.[a]

The laſt cauſe of famine which is mentioned in this inveſtigation, and on which the writer lays conſiderable ſtreſs, is, the very great conſumption of grain in making ſpirits;[b] but in ſtating this as a cauſe of famine, he has evidently fallen into a very groſs error; yet in the Abbé Groſier's general deſcription of China this error has been copied, and the cauſe above mentioned has been conſidered as one of the grand ſources of the evil.[c] But, in reality, the whole tendency of this cauſe is in a contrary direction. The conſumption of corn in any other way, but that of neceſſary food, checks the population before it arrives at the utmoſt limits of ſubſiſtence; and as the grain may be withdrawn from this particular uſe in the time of a ſcarcity, a public granary is thus opened, richer

[a] Lettres Edif. tom. xxii, p. 187. [b] Id. p. 184.
[c] Vol. i, b. iv. c. iii, p. 396, 8vo. Eng. tran.

probably

probably than could have been formed by any other means. When ſuch a conſumption has been once eſtabliſhed, and has become permanent, its effect is exactly as if a piece of land, with all the people upon it, were removed from the country. The reſt of the people would certainly be preciſely in the ſame ſtate as they were before, neither better nor worſe, in years of average plenty; but in a time of dearth the produce of this land would be returned to them, without the mouths to help them to eat it. China, without her diſtilleries, would certainly be more populous; but on a failure of the ſeaſons would have ſtill leſs reſource, than ſhe has at preſent; and, as far as the magnitude of the cauſe would operate, would in conſequence be more ſubject to famines, and thoſe famines would be more ſevere.

The ſtate of Japan reſembles in ſo many reſpects that of China, that a particular conſideration of it would lead into too many repetitions. Monteſquieu attributes its populouſneſs to the birth of a greater number of females;[a] but the

[a] Liv. xxiii, c. xii. It is ſurpriſing that Monteſquieu, who appears ſometimes to underſtand the ſubject of population, ſhould at other times make ſuch obſervations as this.

principal

principal cauſe of this populouſneſs is, without doubt, as in China, the perſevering induſtry of the natives, directed, as it has always been, principally to agriculture.

In reading the preface to Thunberg's account of Japan, it would ſeem extremely difficult, to trace the checks to the population of a country, the inhabitants of which are ſaid to live in ſuch happineſs and plenty; but the continuation of his own work contradicts the impreſſion of his preface; and in the valuable hiſtory of Japan by Kæmpfer theſe checks are ſufficiciently obvious. In the extracts from two hiſtorical chronicles publiſhed in Japan, which he produces,[a] a very curious account is given of the different mortalities, plagues, famines, bloody wars, and other cauſes of deſtruction, which have occurred ſince the commencement of theſe records. The Japaneſe are diſtinguiſhed from the Chineſe, in being much more warlike, ſeditious, diſſolute, and ambitious; and it would appear, from Kæmpfer's account, that the check to population from infanticide, in China, is balanced by the greater diſſoluteneſs of manners with regard to the ſex, and the greater fre-

[a] Book ii.

quency

quency of wars and inteſtine commotions, which prevail in Japan. With regard to the poſitive checks to population, from diſeaſe and famine, the two countries ſeem to be nearly on a level.

CHAP. XIII.

Of the Checks to Population among the Greeks.

It has been generally allowed, and will not indeed admit of a doubt, that the more equal diviſion of property among the Greeks and Romans, in the early period of their hiſtory, and the direction of their induſtry principally to agriculture, muſt have tended greatly to encourage population. Agriculture is not only, as Hume ſtates,[a] that ſpecies of induſtry, which is chiefly requiſite to the ſubſiſtence of multitudes, but it is in fact the *ſole* ſpecies, by which multitudes can exiſt; and all the numerous arts and manufactures of the modern world, by which ſuch numbers appear to be ſupported, have no tendency whatever to increaſe population, except as far as they tend to increaſe the quantity, and to facilitate the diſtribution of the products of agriculture.

In countries where, from the operation of particular cauſes, property in land is divided into

[a] Eſſay xi, p. 467, 4to edit.

very

very large ſhares, theſe arts and manufactures are abſolutely neceſſary to the exiſtence of any conſiderable population. Without them modern Europe would be unpeopled. But where property is divided into ſmall ſhares, the ſame neceſſity for them does not appear. The diviſion itſelf attains immediately one great object, that of diſtribution; and if the demand for men be conſtant, to fight the battles and ſupport the power and dignity of the ſtate, we may eaſily conceive, that this motive, joined to the natural love of a family, might be ſufficient to induce each proprietor to cultivate his land to the utmoſt, in order that it might ſupport the greateſt number of deſcendants.

The diviſion of people into ſmall ſtates, during the early periods of Greek and Roman hiſtory, gave additional force to this motive. Where the number of free citizens did not perhaps exceed ten or twenty thouſand, each individual would naturally feel the value of his own exertions; and, knowing that the ſtate to which he belonged, ſituated in the midſt of envious and watchful rivals, muſt depend chiefly on its population for its means of defence and ſafety, would be ſenſible, that in ſuffering the lands which were allotted to him to lie idle, he

would be deficient in his duty as a citizen. Theſe cauſes appear to have produced a conſiderable attention to agriculture, without the intervention of the artificial wants of mankind to encourage it. Population followed the products of the earth with more than equal pace; and when the overflowing numbers were not taken off by the drains of war or diſeaſe, they found vent in frequent and repeated colonization. The neceſſity of theſe frequent colonizations, joined to the ſmallneſs of the ſtates, which brought the ſubject immediately home to every thinking perſon, could not fail to point out to the legiſlators and philoſophers of thoſe times the ſtrong tendency of population to increaſe beyond the means of ſubſiſtence; and they did not, like the ſtateſmen and projectors of modern days, overlook the conſideration of a queſtion, which ſo deeply affects the happineſs and tranquillity of ſociety. However we may juſtly execrate the barbarous expedients, which they adopted to remove the difficulty, we cannot but give them ſome credit for their penetration in ſeeing it; and in being fully aware, that, if not conſidered and obviated, it would be ſufficient of itſelf to deſtroy their beſt planned ſchemes of republican equality and happineſs.

The

The power of colonization is neceſſarily limited, and after the lapſe of ſome time it might be extremely difficult, if not impoſſible, for a country not particularly well ſituated for this purpoſe, to find a vacant ſpot proper for the ſettlement of its expatriated citizens. It was neceſſary therefore, to conſider of other reſources beſide colonization.

It is probable, that the practice of infanticide had prevailed from the earlieſt ages in Greece. In the parts of America where it was found to exiſt, it appears to have originated from the extreme difficulty of rearing many children in a ſavage and wandering life, expoſed to frequent famines and perpetual wars. We may eaſily conceive, that it had a ſimilar origin among the anceſtors of the Greeks, or the native inhabitants of the country. And when Solon permitted the expoſing of children, it is probable, that he only gave the ſanction of law to a cuſtom already prevalent.

In this permiſſion he had, without doubt, two ends in view. Firſt, that which is moſt obvious, the prevention of ſuch an exceſſive population, as would cauſe univerſal poverty and diſcontent; and, ſecondly, that of keeping the population up to the level of what the territory

could ſupport, by removing the terrors of too numerous a family, and conſequently the principal obſtacle to marriage. From the effect of this practice in China we have reaſon to think, that it is better calculated to attain the latter than the former purpoſe. But if the legiſlator either did not ſee this, or if the barbarous habits of the times prompted parents invariably to prefer the murder of their children to poverty, the practice would appear to be very particularly calculated to anſwer both the ends in view; and to preſerve, as completely and as conſtantly as the nature of the thing would permit, the requiſite proportion between the food and the numbers which were to conſume it.

On the very great importance of attending to this proportion, and the evils that muſt neceſſarily reſult, of weakneſs on the one hand, or of poverty, on the other, from the deficiency or the exceſs of population, the Greek political writers ſtrongly inſiſt; and propoſe in conſequence various modes of maintaining the relative proportion deſired.

Plato, in the republic which he conſiders in his books of laws, limits the number of free citizens, and of habitations, to five thouſand and forty; and this number he thinks may be preſerved,

ſerved, if the father of every family chooſe one out of his ſons for his ſucceſſor to the lot of land which he has poſſeſſed, and, diſpoſing of his daughters in marriage according to law, diſtribute his other ſons, if he have any, to be adopted by thoſe citizens who are without children. But if the number of children upon the whole be either too great or too few, the magiſtrate is to take the ſubject particularly into his conſideration, and to contrive ſo, that the ſame number of five thouſand and forty families ſhould ſtill be maintained. There are many modes, he thinks, of effecting this object. Procreation, when it goes on too faſt, may be checked; or, when it goes on too ſlow, may be encouraged; by the proper diſtribution of honours and marks of ignominy, and by the admonitions of the elders, to prevent or promote it according to circumſtances.[a]

In his philoſophical republic[b] he enters more particularly into this ſubject, and propoſes, that the moſt excellent among the men ſhould be joined in marriage to the moſt excellent among the women, and the inferior citizens matched with the inferior females; and that the offſpring of the firſt ſhould be brought up, of the

[a] Plato de Legibus, lib. v. [b] Plato de Republicâ, lib. v.

others not. On certain feſtivals appointed by the laws, the young men and women who are betrothed are to be aſſembled, and joined together with ſolemn ceremonies. But the number of marriages is to be determined by the magiſtrates; that, taking into conſideration the drains from wars, diſeaſes, and other cauſes, they may preſerve, as nearly as poſſible, ſuch a proportion of citizens, as will be neither too numerous nor too few, according to the reſources and demands of the ſtate. The children who are thus born from the moſt excellent of the citizens are to be carried to certain nurſes deſtined to this office, inhabiting a ſeparate part of the city; but thoſe which are born from the inferior citizens, and any from the others which are imperfect in their limbs, are to be buried in ſome obſcure and unknown place.

He next proceeds to conſider the proper age for marriage, and determines it to be twenty for the women and thirty for the men. Beginning at twenty, the woman is to bear children for the ſtate till ſhe is forty, and the man is to fulfil his duty in this reſpect, from thirty to fifty-five. If a man produce a child into public either before or after this period, the action is to be conſidered in the ſame criminal and profane light,

as

as if he had produced one without the nuptial ceremonies, and inſtigated ſolely by incontinence. The ſame rule ſhould hold, if a man who is of the proper age for procreation be connected with a woman who is alſo of the proper age, but without the ceremony of marriage by the magiſtrate; he is to be conſidered as having given to the ſtate a ſpurious, profane, and inceſtuous offspring. When both ſexes have paſſed the age aſſigned for preſenting children to the ſtate, Plato allows a great latitude of intercourſe, but no child is to be brought to light. Should any infant by accident be born alive, it is to be expoſed in the ſame manner as if the parents could not ſupport it.[a]

From theſe paſſages it is evident, that Plato fully ſaw the tendency of population to increaſe beyond the means of ſubſiſtence. His expedients for checking it are indeed execrable; but the expedients themſelves, and the extent to which they were to be uſed, ſhow his conceptions of the magnitude of the difficulty. Contemplating, as he certainly muſt do in a ſmall republic, a great proportional drain of people by wars, if he could ſtill propoſe to deſtroy the children of all the inferior and leſs perfect citizens, to deſtroy

[a] Plato de Repub. lib. v.

alſo all that were born not within the preſcribed ages and with the preſcribed forms, to fix the age of marriage late, and after all to regulate the number of theſe marriages, his experience and his reaſonings muſt have ſtrongly pointed out to him the great power of the principle of increaſe, and the neceſſity of checking it.

Ariſtotle appears to have ſeen this neceſſity ſtill more clearly. He fixes the proper age of marriage at thirty-ſeven for the men, and eighteen for the women, which muſt of courſe condemn a great number of women to celibacy, as there never can be ſo many men of thirty-ſeven as there are women of eighteen. Yet, though he has fixed the age of marriage for the men at ſo late a period, he ſtill thinks, that there may be too many children, and propoſes, that the number allowed to each marriage ſhould be regulated; and if any woman be pregnant after ſhe has produced the preſcribed number, that an abortion ſhould be procured before the fœtus has life.

The period of procreating children for the ſtate is to ceaſe with the men at fifty-four or fifty-five, becauſe the offspring of old men, as well as of men too young, is imperfect both in body and mind. When both ſexes have paſſed the preſcribed

preſcribed age, they are allowed to continue a connexion; but, as in Plato's republic, no child which may be the reſult is to be brought to light.[a]

In diſcuſſing the merits of the republic propoſed by Plato in his books of laws, Ariſtotle is of opinion, that he has by no means been ſufficiently attentive to the ſubject of population; and accuſes him of inconſiſtency in equalizing property without limiting the number of children. The laws on this ſubject, Ariſtotle very juſtly obſerves, require to be much more definite and preciſe in a ſtate where property is equalized, than in others. Under ordinary governments an increaſe of population would only occaſion a greater ſubdiviſion of landed property; whereas in ſuch a republic the ſupernumeraries would be altogether deſtitute, becauſe the lands, being reduced to equal and as it were elementary parts, would be incapable of further partition.[d]

[a] Ariſtotelis Opera. de Repub. lib. vii, c. xvi.

[b] De Repub. lib. ii, c. vi. Gillies's Ariſtotle, vol. ii, b. ii, p. 87. For the convenience of thoſe who may not chooſe the trouble of conſulting the original, I refer at the ſame time to Gillies's tranſlation; but ſome paſſages he has wholly omitted, and of others he has not given the literal ſenſe, his object being a free verſion.

He

He then remarks, that it is neceſſary in all caſes, to regulate the proportion of children, that they may not exceed the proper number. In doing this deaths and barrenneſs are of courſe to be taken into conſideration. But if, as in the generality of ſtates, every perſon be left free to have as many children as he pleaſes, the neceſſary conſequence muſt be poverty; and poverty is the mother of villany and ſedition. On this account Pheidon of Corinth, one of the moſt ancient writers on the ſubject of politics, introduced a regulation directly the reverſe of Plato's, and limited population without equalizing poſſeſſions.[a]

Speaking afterwards of Phaleas of Chalcedon, who propoſed as a moſt ſalutary inſtitution, to equalize wealth among the citizens, he adverts again to Plato's regulations reſpecting property, and obſerves, that thoſe who would thus regulate the extent of fortunes ought not to be ignorant, that it is abſolutely neceſſary at the ſame time to regulate the number of children. For if children multiply beyond the means of ſupporting them, the law will neceſſarily be broken, and

[a] De Repub. lib. ii, c. vii. Gillies's Ariſtot. vol. ii, b. ii, p. 87.

families

families will be ſuddenly reduced from opulence to beggary, a revolution always dangerous to public tranquillity.[a]

It appears from theſe paſſages, that Ariſtotle clearly ſaw, that the ſtrong tendency of the human race to increaſe, unleſs checked by ſtrict and poſitive laws, was abſolutely fatal to every ſyſtem founded on equality of property; and there cannot ſurely be a ſtronger argument againſt any ſyſtem of this kind, than the neceſſity of ſuch laws as Ariſtotle himſelf propoſes.

From a remark which he afterwards makes reſpecting Sparta, it appears ſtill more clearly, that he fully underſtood the principle of population. From the improvidence of the laws relating to ſucceſſion, the landed property in Sparta had been engroſſed by a few, and the effect was greatly to diminiſh the populouſneſs of the country. To remedy this evil, and to ſupply men for continual wars, the kings preceding Lycurgus had been in the habit of naturalizing ſtrangers. It would have been much better, however, according to Ariſtotle, to have in-

[a] De Repub. lib. ii, c. vii. Gillies's Ariſtot. vol. ii, b. ii, p. 91.

creaſed

creaſed the number of citizens by a nearer equalization of property. But the law relating to children was directly adverſe to this improvement. The legiſlator, wiſhing to have many citizens, had encouraged as much as poſſible the procreation of children. A man who had three ſons was exempt from the night-watch; and he who had four enjoyed a complete immunity from all public burdens. But it is evident, Ariſtotle moſt juſtly obſerves, that the birth of a great number of children, the diviſion of the lands remaining the ſame, would neceſſarily cauſe only an accumulation of poverty.[a]

He here ſeems to ſee exactly the error, into which many other legiſlators beſide Lycurgus have fallen; and to be fully aware, that to encourage the birth of children, without providing properly for their ſupport, is to obtain a very ſmall acceſſion to the population of a country at the expenſe of a very great acceſſion of miſery.

The legiſlator of Crete,[b] as well as Solon, Pheidon, Plato, and Ariſtotle, ſaw the neceſſity of checking population in order to prevent ge-

[a] De Repub. lib. ii, c. ix. Gillies's Ariſtot. vol. ii, b. ii, p. 107. [b] Ariſtot. de Repub. lib. ii, c. x. Gillies's Ariſtot. vol. ii, b. ii, p. 113.

neral

neral poverty; and as we muſt ſuppoſe, that the opinions of ſuch men, and the laws founded upon them, would have conſiderable influence, it is probable, that the preventive check to increaſe from late marriages and other cauſes operated to a conſiderable degree among the free citizens of Greece.

For the poſitive checks to population we need not look beyond the wars, in which theſe ſmall ſtates were almoſt continually engaged; though we have an account of one waſting plague, at leaſt, in Athens; and Plato ſuppoſes the caſe of his republic being already reduced by diſeaſe.[a] Their wars were not only almoſt conſtant, but extremely bloody. In a ſmall army, the whole of which would probably be engaged in cloſe fight, a much greater number in proportion would be ſlain, than in the large modern armies, a conſiderable part of which often remains untouched;[b] and as all the free citizens of theſe republics were generally employed as ſoldiers in every war, loſſes would be felt very ſeverely, and would not appear to be very eaſily repaired.

[a] De legibus, lib. v. [b] Humes Eſſay, xi, p. 451.

CHAP.

CHAP. XIV.

Of the Checks to Population among the Romans.

THE havoc made by war in the ſmaller ſtates of Italy, particularly during the firſt ſtruggles of the Romans for power, ſeems to have been ſtill greater than in Greece. Wallace, in his diſſertation on the numbers of mankind, after alluding to the multitudes which fell by the ſword in theſe times, obſerves, "On an accurate re-"view of the hiſtory of the Italians during this "period, we ſhall wonder how ſuch vaſt mul-"titudes could be raiſed, as were engaged in "thoſe continual wars till Italy was entirely "ſubdued."[a] And Livy expreſſes his utter aſtoniſhment, that the Volſci and Æqui, ſo often as they were conquered, ſhould have been able to bring freſh armies into the field.[b] But theſe wonders will perhaps be ſufficiently accounted for, if we ſuppoſe, what ſeems to be highly pro-

[a] Diſſertation, p. 62, 8vo, 1763, Edinburgh.

[b] Lib. vi, c. xii.

bable,

bable, that the conſtant drains from wars had introduced the habit of giving nearly full ſcope to the power of population; and that a much greater number of youths, in proportion to the whole people, were yearly riſing into manhood and becoming fit to bear arms, than is uſual in other ſtates not ſimilarly circumſtanced. It was, without doubt, the rapid influx of theſe ſupplies, which enabled them, like the ancient Germans, to aſtoniſh future hiſtorians, by renovating in ſo extraordinary a manner their defeated and half deſtroyed armies.

Yet there is reaſon to believe, that the practice of infanticide prevailed in Italy, as well as in Greece, from the earlieſt times. A law of Romulus forbad the expoſing of children before they were three years old,[a] which implies, that the cuſtom of expoſing them as ſoon as they were born had before prevailed. But this practice was of courſe never reſorted to, unleſs when the drains from wars were inſufficient to make room for the riſing generation; and conſequently, though it may be conſidered as one of the poſitive checks to the full power of increaſe, yet, in the actual ſtate of things, it certainly contri-

[a] Dionyſius Halicarn. lib. ii. 15.

buted

buted rather to promote than impede population.

Among the Romans themſelves, engaged as they were in inceſſant wars from the beginning of their republic to the end of it, many of which were dreadfully deſtructive, the poſitive check to population from this cauſe alone muſt have been enormouſly great. But this cauſe alone, great as it was, would never have occaſioned that want of Roman citizens, under the emperors, which prompted Auguſtus and Trajan to iſſue laws for the encouragement of marriage and of children, if other cauſes ſtill more powerful in depopulation had not concurred.

When the equality of property, which had formerly prevailed in the Roman territory, had been deſtroyed by degrees, and the land had fallen into the hands of a few great proprietors; the citizens, who were by this change ſucceſſively deprived of the means of ſupporting themſelves, would naturally have no reſource to prevent them from ſtarving, but that of ſelling their labour to the rich, as in modern ſtates: but from this reſource they were completely cut off by the prodigious number of ſlaves, which, increaſing by conſtant influx with the increaſing luxury of Rome, filled up every employment

both

both in agriculture and manufactures. Under ſuch circumſtances, ſo far from being aſtoniſhed that the number of free citizens ſhould decreaſe, the wonder ſeems to be, that any ſhould exiſt beſide the proprietors. And in fact many could not have exiſted but for a ſtrange and prepoſterous cuſtom, which however, perhaps, the ſtrange and unnatural ſtate of the city required, that of diſtributing vaſt quantities of corn to the poorer citizens gratis. Two hundred thouſand received this diſtribution in Auguſtus's time; and it is highly probable, that a great part of them had little elſe to depend upon. It is ſuppoſed to have been given to every man of full years; but the quantity was not enough for a family, and too much for an individual.[a] It could not therefore enable them to increaſe; and, from the manner in which Plutarch ſpeaks of the cuſtom of expoſing children among the poor,[b] there is great reaſon to believe, that many were deſtroyed in ſpite of the jus trium liberorum. The paſſage in Tacitus, in which, ſpeaking of the Germans, he alludes to this cuſtom in Rome, ſeems to point to the ſame con-

[a] Hume, Eſſay xi, p. 488. [b] De amore prolis.

cluſion.[a] What effect, indeed, could ſuch a law have among a ſet of people, who appear to have been ſo completely barred out from all the means of acquiring a ſubſiſtence, except that of charity, that they would be ſcarcely able to ſupport themſelves, much leſs a wife and two or three children? If half of the ſlaves had been ſent out of the country, and the people had been employed in agriculture and manufactures, the effect would have been to increaſe the number of Roman citizens with more certainty and rapidity than ten thouſand laws for the encouragement of children.

It is poſſible, that the jus trium liberorum, and the other laws of the ſame tendency, might have been of ſome little uſe among the higher

[a] De moribus Germanorum, 19. How completely the laws relating to the encouragement of marriage and of children were deſpiſed, appears from a ſpeech of Minucius Felix in Octavio, cap. 30. "*Vos enim video procreatos filios nunc* "*feris et avibus exponere, nunc adſtrangulatos miſero mortis* "*genere elidere; ſunt quæ in ipſis viſceribus medicaminibus* "*epotis originem futuri hominis extinguant, et parricidium fa-* "*ciant antequam pariant.*"

This crime had grown ſo much into a cuſtom in Rome, that even Pliny attempts to excuſe it; "Quoniam aliquarum "fecunditas plena liberis tali veniâ indiget." Lib. xxix, c. iv.

claſſes

claſſes of the Roman citizens; and indeed from the nature of theſe laws, conſiſting as they did principally of privileges, it would appear, that they were directed chiefly to this part of ſociety. But vicious habits of every poſſible kind preventive of population[a] ſeem to have been ſo generally prevalent at this period, that no corrective laws could have any conſiderable influence. Monteſquieu juſtly obſerves, that "the "corruption of manners had deſtroyed the "office of cenſor, which had been eſtabliſhed "itſelf to deſtroy the corruption of manners; "but when the corruption of manners be-"comes general, cenſure has no longer any "force."[b] Thirty-four years after the paſſing of the law of Auguſtus reſpecting marriage, the Roman Knights demanded its repeal. On ſeparating the married and the unmarried, it appeared, that the latter conſiderably exceeded in number the former; a ſtrong proof of the inefficacy of the law.[c]

In moſt countries vicious habits preventive of population appear to be a conſequence rather

[a] Sed jacet aurato vix ulla puerpera lecto
Tantum artes hujus, tantum medicamina poſſunt,
Quæ ſteriles facit, atque homines in ventre necandos
Conducit. Juvenal, ſat. vi, 593.

[b] Eſprit des Loix, liv. xxiii, c. 21. [c] Ibid.

than a cauſe of the infrequency of marriage; but in Rome the depravity of morals ſeems to have been the direct cauſe which checked the marriage union, at leaſt among the higher claſſes. It is impoſſible to read the ſpeech of Metellus Numidicus in his cenſorſhip without indignation and diſguſt. "If it were poſſible," he ſays, "entirely to go without wives, we would "deliver ourſelves at once from this evil; but "as the laws of nature have ſo ordered it, that "we can neither live happy with them, nor "continue the ſpecies without them, we ought "to have more regard for our laſting ſecurity "than for our tranſient pleaſures."*

Poſitive laws to encourage marriage and population, enacted on the urgency of the occaſion, and not mixed with religion, as in China and ſome other countries, are ſeldom calculated to anſwer the end which they aim at, and therefore generally indicate ignorance in the legiſlator who propoſes them; but the apparent neceſſity of them almoſt invariably indicates a very great degree of moral and political depravity in the ſtate; and in the countries in which they are moſt ſtrongly inſiſted on, not only vicious manners will generally be found to prevail, but

* Aulus Gellius, lib. i, c. 6.

political

political inſtitutions extremely unfavourable to induſtry, and conſequently to population.

On this account I cannot but agree with Wallace[a] in thinking that Hume was wrong in his ſuppoſition, that the Roman world was probably the moſt populous during the long peace under Trajan and the Antonines.[b] We well know, that wars do not depopulate much while induſtry continues in vigour; and that peace will not increaſe the number of people, when they cannot find the means of ſubſiſtence. The renewal of the laws relating to marriage under Trajan indicates the continued prevalence of vicious habits, and of a languiſhing induſtry, and ſeems to be inconſiſtent with the ſuppoſition of a great increaſe of population.

It might be ſaid, perhaps, that the vaſt profuſion of ſlaves would more than make up for the want of Roman citizens; but it appears, that the labour of theſe ſlaves was not ſufficiently directed to agriculture to ſupport a very great population. Whatever might be the caſe with ſome of the provinces, the decay of agriculture in Italy ſeems to be generally acknowledged. The pernicious cuſtom of importing great quantities of corn to diſtribute gratis to the people

[a] Diſſertation, Appendix, p. 247. [b] Eſſay xi, p. 505.

had given it a blow, which it never afterwards recovered. Hume obſerves, that "when the "Roman authors complain that Italy, which "formerly exported corn, became dependent "on all the provinces for its daily bread, they "never aſcribed this alteration to the increaſe "of its inhabitants, but to the neglect of tillage "and agriculture."[a] And in another place he ſays, "All ancient authors tell us, that there was "a perpetual flux of ſlaves to Italy from the "remoter provinces, particularly Syria, Cilicia, "Cappadocia, and the leſſer Aſia, Thrace, and "Egypt; yet the number of people did not "increaſe in Italy; and writers complain of "the continual decay of induſtry and agricul-"ture."[b] It ſeems but little probable, that the peace under Trajan and the Antonines ſhould have given ſo ſudden a turn to the habits of the people, as eſſentially to alter this ſtate of things.

On the condition of ſlavery, it may be obſerved, that there cannot be a ſtronger proof of its unfavourableneſs to the propagation of the ſpecies in the countries where it prevails, than the neceſſity of this continual influx. The neceſſity forms at once a complete refutation of the obſervation of Wallace, that the ancient

[a] Eſſay xi, p. 504. [b] Id. p. 433.

ſlaves

ſlaves were more ſerviceable in raiſing up people than the inferior ranks of men in modern times.[a] Though it is undoubtedly true, as he obſerves, that all our labourers do not marry, and that many of their children die, and become ſickly and uſeleſs through the poverty and negligence of their parents;[b] yet notwithſtanding theſe obſtacles to increaſe, there is perhaps ſcarcely an inſtance to be produced, where the lower claſſes of ſociety in any country, if free, do not raiſe up people fully equal to the demand for their labour.

To account for the checks to population which are peculiar to a ſtate of ſlavery, and which render a conſtant recruit of numbers neceſſary, we muſt adopt the compariſon of ſlaves to cattle, which Wallace and Hume have made; Wallace, to ſhow that it would be the intereſt of maſters to take care of their ſlaves and rear up their offſpring;[c] and Hume, to prove that it would more frequently be the intereſt of the maſter to prevent than to encourage their breeding.[d] If Wallace's obſervation had been juſt, it is not to be doubted, that the ſlaves would have kept up their own numbers with eaſe by

[a] Diſſert. on the numbers of mankind, p. 91. [b] Id. p. 88.
[c] Id. p. 89. [d] Hume, Eſſay xi, p. 433.

procreation; and as it is acknowledged, that they did not do this, the truth of Hume's obſervation is clearly evinced. "To rear a child in London "till he could be ſerviceable would coſt much "dearer, than to buy one of the ſame age from "Scotland or Ireland, where he had been raiſed "in a cottage, covered with rags, and fed on "oatmeal and potatoes. Thoſe who had ſlaves "therefore, in all the richer and more populous "countries, would diſcourage the pregnancy of "the females, and either prevent or deſtroy the "birth."[a] It is acknowledged by Wallace, that the male ſlaves greatly exceeded in number the females,[b] which muſt neceſſarily be an additional obſtacle to their increaſe. It would appear therefore, that the preventive check to population muſt have operated with very great force among the Greek and Roman ſlaves; and as they were often ill treated, fed perhaps ſcantily, and ſometimes great numbers of them confined together in cloſe and unwholeſome ergaſtula, or dungeons,[c] it is probable, that the poſitive checks to population from diſeaſe were alſo ſevere, and that when epidemics prevailed

[a] Hume, Eſſay xi, p. 433. [b] Appendix to Diſſertation, p. 182. [c] Hume, Eſſay xi, p. 430.

they

they would be moſt deſtructive in this part of the ſociety.

The unfavourableneſs of ſlavery to the propagation of the ſpecies in the country where it prevails is not however deciſive of the queſtion reſpecting the abſolute population of ſuch a country, or the greater queſtion reſpecting the populouſneſs of ancient and modern nations. We know, that ſome countries could afford a great and conſtant ſupply of ſlaves, without being in the ſmalleſt degree depopulated themſelves; and if theſe ſupplies were poured in, as they probably would be, exactly in proportion to the demand for labour in the nation which received them, the queſtion reſpecting the populouſneſs of this nation would reſt preciſely on the ſame grounds as in modern ſtates, and depend upon the number of people which it could employ and ſupport. Whether the practice of domeſtic ſlavery therefore prevail or not, it may be laid down as a poſition not to be controverted, that, taking a ſufficient extent of territory to include within it exportation and importation, and allowing ſome variation for the prevalence of luxury or of frugal habits, the population of theſe countries will always be in proportion to the food which the earth

earth is made to produce. And no cauſe, phyſical or moral, unleſs it operate in an exceſſive and unuſual manner,[a] can have any conſiderable and permanent effect on the population, except in as far as it influences the production and diſtribution of the means of ſubſiſtence.

In the controverſy concerning the populouſneſs of ancient and modern nations, this point has not been ſufficiently attended to; and phyſical and moral cauſes have been brought forward on both ſides, from which no juſt inference in favour of either party could be drawn. It ſeems to have eſcaped the attention of both writers, that the more productive and populous a country is in its actual ſtate, the leſs probable will be its power of obtaining a further increaſe of produce; and conſequently the more checks muſt neceſſarily be called into action, to keep the population down to the level of this ſtationary or ſlowly increaſing produce. From

[a] The extreme inſalubrity of Batavia, and perhaps the plague in ſome countries, may be conſidered as phyſical cauſes operating in an exceſſive degree. The extreme and unuſual attachment of the Romans to a vicious celibacy, and the promiſcuous intercourſe in Otaheite, may be conſidered as moral cauſes of the ſame nature. Such inſtances, and others which might perhaps be found, make it neceſſary to qualify the general propoſition as in the text.

finding

finding ſuch checks, therefore, in ancient or modern nations, no inference can be drawn againſt the abſolute populouſneſs of either. On this account, the prevalence of the ſmall-pox, and of other diſorders unknown to the ancients, can by no means be conſidered as an argument againſt the populouſneſs of modern nations, though to theſe phyſical cauſes both Hume[a] and Wallace[b] allow conſiderable weight.

In the moral cauſes which they have brought forward, they have fallen into a ſimilar error. Wallace introduces the poſitive encouragements to marriage among the ancients, as one of the principal cauſes of the ſuperior populouſneſs of the ancient world;[c] but the neceſſity of poſitive laws to encourage marriage certainly rather indicates a want than an abundance of people; and in the inſtance of Sparta, to which he particularly refers, it appears from the paſſage in Ariſtotle, mentioned in the laſt chapter, that the laws to encourage marriage were inſtituted for the expreſs purpoſe of remedying a marked deficiency of people. In a country with a crowded and overflowing population, a legiſlator would never think of making ex-

[a] Eſſay xi, p. 425. [b] Diſſertation, p. 80. [c] Id. p. 93.

preſs

preſs laws to encourage marriage and the procreation of children. Other arguments of Wallace will be found upon examination to be almoſt equally ineffectual to his purpoſe.

Some of the cauſes which Hume produces are in the ſame manner unſatisfactory, and rather make againſt the inference which he has in view, than for it. The number of footmen, houſemaids, and other perſons remaining unmarried in modern ſtates, he allows to be an argument againſt their populouſneſs.[a] But the contrary inference of the two appears to be the more probable. When the difficulties attending the rearing a family are very great, and conſequently many perſons of both ſexes remain ſingle, we may naturally enough infer, that population is ſtationary, but by no means that it is not abſolutely great; becauſe the difficulty of rearing a family may ariſe from the very circumſtance of a great abſolute population, and the conſequent fulneſs of all the channels to a livelihood; though the ſame difficulty may undoubtedly exiſt in a thinly-peopled country, which is yet ſtationary in its population. The number of unmarried perſons

[a] Eſſay xi.

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in proportion to the whole number may form ſome criterion, by which we can judge whether population be increaſing, ſtationary, or decreaſing; but will not enable us to determine any thing reſpecting abſolute populouſneſs. Yet even in this criterion we are liable to be deceived. In ſome of the ſouthern countries early marriages are general, and very few women remain in a ſtate of celibacy, yet the people not only do not increaſe, but the actual number is perhaps ſmall. In this caſe the removal of the preventive check is made up by the exceſſive force of the poſitive check. The ſum of all the poſitive and preventive checks taken together forms undoubtedly the immediate cauſe which repreſſes population; but we never can expect to obtain and eſtimate accurately this ſum in any country; and we can certainly draw no ſafe concluſion from the contemplation of two or three of theſe checks taken by themſelves, becauſe it ſo frequently happens, that the exceſs of one check is balanced by the defect of ſome other. Cauſes which affect the number of births or deaths may or may not affect the average population, according to circumſtances; but cauſes which affect the production and diſtribution of the means

means of ſubſiſtence muſt neceſſarily affect population; and it is therefore only on theſe cauſes, beſide actual enumerations, on which we can with any certainty rely.

All the checks to population, which have been hitherto conſidered in the courſe of this review of human ſociety, are clearly reſolvable into moral reſtraint, vice, and miſery.

Of that branch of the preventive check, which I have denominated moral reſtraint, though it might be raſh to affirm, that it has not had ſome ſhare in repreſſing the natural power of population, yet it muſt be allowed to have operated very feebly indeed, compared with the others. Of the other branch of the preventive check, which comes under the head of vice, though its effect appears to have been very conſiderable in the later periods of Roman Hiſtory, and in ſome other countries; yet, upon the whole, its operation ſeems to have been inferior to the poſitive checks. A large portion of the procreative power appears to have been called into action, the redundancy from which was checked by violent cauſes. Among theſe, war is the moſt prominent and ſtriking feature; and after this may be ranked famines and violent diſeaſes. In moſt of the countries conſidered,

ſidered, the population ſeems to have been ſeldom meaſured accurately according to the average and permanent means of ſubſiſtence, but generally to have vibrated between the two extremes, and conſequently the oſcillations between want and plenty are ſtrongly marked, as we ſhould naturally expect among leſs civilized nations.

ESSAY, &c.

BOOK II.

OF THE CHECKS TO POPULATION IN THE DIFFERENT STATES OF MODERN EUROPE.

CHAP. I.

Of the Checks to Population in Norway.

In reviewing the ſtates of modern Europe, we ſhall be aſſiſted in our inquiries by regiſters of births, deaths, and marriages, which, when they are complete and correct, point out to us with ſome degree of preciſion, whether the prevailing checks to population are of the poſitive or of the preventive kind. The habits of moſt European nations are of courſe much alike, owing to the ſimilarity of the circumſtances in which they are placed; and it is to be expected, therefore, that their regiſters ſhould ſometimes give the ſame reſults. Relying, however, too much

much upon this occaſional coincidence, political calculators have been led into the error of ſuppoſing, that there is, generally ſpeaking, an invariable order of mortality in all countries: but it appears, on the contrary, that this order is extremely variable; that it is very different in different places of the ſame country, and within certain limits depends upon circumſtances, which it is in the power of man to alter.

Norway, during nearly the whole of the laſt century, was in a peculiar degree exempt from the drains of people by war. The climate is remarkably free from epidemic ſickneſſes, and, in common years, the mortality is leſs than in any other country in Europe, the regiſters of which are known to be correct.[a] The proportion of the annual deaths to the whole population, on an average throughout the whole country, is only as 1 to 48.[b] Yet the population of Norway never ſeems to have increaſed with great rapidity. It has made a ſtart within the laſt ten or fifteen years, but till that period its progreſs muſt have been very ſlow, as we know

[a] The regiſters for Ruſſia give a ſmaller mortality; but it is ſuppoſed that they are defective.

[b] Thaarup's Statiſtik der Daniſchen Monarchie, vol. ii, p. 4.

that

that the country was peopled in very early ages, and in 1769 its population was only 723,141.[a]

Before we enter upon an examination of its internal economy, we muſt feel aſſured, that, as the poſitive checks to its population have been ſo ſmall, the preventive checks muſt have been proportionably great; and we accordingly find from the regiſters, that the proportion of yearly marriages to the whole population is as 1 to 130,[b] which is a ſmaller proportion of marriages than appears in the regiſters of any other country, except Switzerland.

[a] Thaarup's Statiſtik der Daniſchen Monarchie, Table ii, p. 5.

[b] Id. vol. ii, p. 4. The proportion of yearly marriages to the whole population is one of the moſt obvious criterions of the operation of the preventive check, though not quite a correct one. Generally ſpeaking, the preventive check is greater than might be inferred from this criterion; becauſe in the healthy countries of Europe, where a ſmall proportion of marriages takes place, the greater number of old people living at the time of their marriages will be more than counterbalanced by the ſmaller proportion of perſons under the age of puberty. In ſuch a country as Norway, the perſons from 20 to 50, that is, of the moſt likely age to marry, bear a greater proportion to the whole population than in moſt of the other countries of Europe; and conſequently the actual proportion of marriages in Norway, compared with that of others, will not expreſs the full extent in which the preventive check operates.

One cauſe of this ſmall number of marriages is the mode, in which the enrolments for the army have been conducted till within very few years. Every man in Denmark and Norway born of a farmer or labourer is a ſoldier.[a] For merly the commanding officer of the diſtrict might take theſe peaſants at any age he pleaſed, and he in general preferred thoſe that were from twenty-five to thirty, to ſuch as were younger. After being taken into the ſervice, a man could not marry without producing a certificate ſigned by the miniſter of the pariſh, that he had ſubſtance enough to ſupport a wife and family; and even then it was further neceſſary for him to obtain the permiſſion of the officer. The difficulty, and ſometimes the expenſe of obtaining this certificate and permiſſion, generally deterred thoſe who were not in very good circumſtances from thinking of marriage, till their ſervice of ten years was expired; and as they might be enrolled at any age under thirty-ſix, and the officers were apt to take the oldeſt firſt, it would often be late in life, before they could feel themſelves at liberty to ſettle.

[a] The few particulars, which I ſhall mention relating to Norway, were collected during a ſummer excurſion in that country during the year 1799.

Though

Though the miniſter of the pariſh had no legal power to prevent a man from marrying, who was not enrolled for ſervice; yet it appears, that cuſtom had in ſome degree ſanctioned a diſcretionary power of this kind, and the prieſt often refuſed to join a couple together, when the parties had no probable means of ſupporting a family.

Every obſtacle, however, of this nature, whether ariſing from law or cuſtom, has now been entirely removed. A full liberty is given to marry at any age, without leave either of the officer or prieſt; and in the enrolments for the army, all thoſe of the age of twenty are taken firſt, then all thoſe of twenty-two, and ſo on, till the neceſſary number is completed.

The officers in general diſapprove of this change. They ſay, that a young Norwegian has not arrived at his full ſtrength, and does not make a good ſoldier at twenty. And many are of opinion, that the peaſants will now marry too young, and that more children will be born, than the country can ſupport.

But independently of any regulations reſpecting the military enrolments, the peculiar ſtate of Norway throws very ſtrong obſtacles in the way of early marriages. There are no large

manufacturing towns, to take off the overflowing population of the country; and as each village naturally furniſhes from itſelf a ſupply of hands more than equal to the demand, a change of place in ſearch of work ſeldom promiſes any ſucceſs. Unleſs therefore an opportunity of foreign emigration offer, the Norwegian peaſant generally remains in the village in which he was born; and as the vacancies in houſes and employments muſt occur very ſlowly, owing to the ſmall mortality that takes place, he will often ſee himſelf compelled to wait a conſiderable time, before he can attain a ſituation, which will enable him to rear a family.

The Norway farms have in general a certain number of married labourers employed upon them, in proportion to their ſize, who are called houſemen. They receive from the farmer a houſe, and a quantity of land nearly ſufficient to maintain a family; in return for which they are under the obligation of working for him at a low and fixed price, whenever they are called upon. Except in the immediate neighbourhood of the towns, and on the ſeacoaſt, the vacancy of a place of this kind is the only proſpect which preſents itſelf of providing for a family. From the ſmall number of people, and the little variety of employment, the ſubject is brought

brought diſtinctly within the view of each individual; and he muſt feel the abſolute neceſſity of repreſſing his inclinations to marriage, till ſome ſuch vacancy offer. If, from the plenty of materials, he ſhould be led to build a houſe himſelf, it could not be expected, that the farmer, if he had a ſufficient number of labourers before, ſhould give him an adequate portion of land with it; and though he would in general find employment for three or four months in the ſummer, yet there would be little chance of his earning enough to ſupport a family during the whole year. It is probable, that it was in caſes of this kind, where the impatience of the parties prompted them to build, or propoſe to build a houſe themſelves, and truſt to what they could earn, that the pariſh prieſts exerciſed the diſcretionary power of refuſing to marry.

The young men and women therefore are obliged to remain with the farmers as unmarried ſervants, till a houſeman's place becomes vacant: and of theſe unmarried ſervants there is in every farm, and every gentleman's family, a much greater proportion, than the work would ſeem to require. There is but little diviſion of labour in Norway. Almoſt all the wants of domeſtic economy are ſupplied in each ſeparate

houſehold. Not only the common operations of brewing, baking, and waſhing, are carried on at home, but many families make or import their own cheeſe and butter, kill their own beef and mutton, import their own grocery ſtores; and the farmers and country people in general ſpin their own flax and wool, and weave their own linen and woollen clothes. In the largeſt towns, ſuch as Chriſtiania and Drontheim, there is nothing that can be called a market. It is extremely difficult to get a joint of freſh meat; and a pound of freſh butter is an article not to be purchaſed, even in the midſt of ſummer. Fairs are held at certain ſeaſons of the year, and ſtores of all kinds of proviſions that will keep are laid in at theſe times; and, if this care be neglected, great inconveniencies are ſuffered, as ſcarcely any thing is to be bought retail. Perſons who make a temporary reſidence in the country, or ſmall merchants not poſſeſſed of farms, complain heavily of this inconvenience; and the wives of merchants, who have large eſtates, ſay, that the domeſtic economy of a Norway family is ſo extenſive and complicated, that the neceſſary ſuperintendence of it requires their whole attention, and that they can find no time for any thing elſe.

It

It is evident, that a ſyſtem of this kind muſt require a great number of ſervants. It is ſaid beſides, that they are not remarkable for diligence, and that to do the ſame quantity of work more are neceſſary than in other countries. The conſequence is, that in every eſtabliſhment the proportion of ſervants will be found two or three times as great as in England; and a farmer in the country, who in his appearance is not to be diſtinguiſhed from any of his labourers, will ſometimes have a houſehold of twenty perſons, including his own family.

The means of maintenance to a ſingle man are, therefore, much leſs confined than to a married man; and under ſuch circumſtances the lower claſſes of people cannot increaſe much, till the increaſe of mercantile ſtock, or the diviſion and improvement of farms, furniſhes a greater quantity of employment for married labourers. In countries more fully peopled this ſubject is always involved in great obſcurity. Each man naturally thinks, that he has as good a chance of finding employment as his neighbour; nd that, if he fail in one place, he ſhall ſucceed in ſome other. He marries, therefore, and truſts to fortune; and the effect too frequently is, that the redundant population occaſioned

caſioned in this manner is repreſſed by the poſitive checks of poverty and diſeaſe. In Norway the ſubject is not involved in the ſame obſcurity. The number of additional families, which the increaſing demand for labour will ſupport, is more diſtinctly marked. The population is ſo ſmall, that even in the towns it is difficult to fall into any conſiderable error on this ſubject; and in the country the diviſion and improvement of an eſtate, and the creation of a greater number of houſemen's places, muſt be a matter of complete notoriety. If a man can obtain one of theſe places, he marries, and is able to ſupport a family; if he cannot obtain one, remains ſingle. A redundant population is thus prevented from taking place, inſtead of being deſtroyed after it has taken place.

It is not to be doubted, that the general prevalence of the preventive check to population, owing to the ſtate of ſociety which has been deſcribed, together with the obſtacles thrown in the way of early marriages from the enrolments for the army, have powerfully contributed, to place the lower claſſes of people in Norway in a better ſituation, than could be expected from the nature of the ſoil and climate. On the ſeacoaſt, where, on account of the hopes of an adequate

ſupply

ſupply of food from fiſhing, the preventive check does not prevail in the ſame degree, the people are very poor and wretched; and, beyond compariſon, in a worſe ſtate than the peaſants in the interior of the country.

The greateſt part of the ſoil in Norway is abſolutely incapable of bearing corn, and the climate is ſubject to the moſt ſudden and fatal changes. There are three nights about the end of Auguſt, which are particularly diſtinguiſhed by the name of iron nights, on account of their ſometimes blaſting the promiſe of the faireſt crops. On theſe occaſions the lower claſſes of people neceſſarily ſuffer; but as there are ſcarcely any independent labourers, except the houſemen that have been mentioned, who all keep cattle, the hardſhip of being obliged to mix the inner bark of the pine with their bread is mitigated by the ſtores of cheeſe, of ſalt butter, of ſalt meat, ſalt fiſh, and bacon, which they are generally enabled to lay up for the winter proviſion. The period in which the want of corn preſſes the moſt ſeverely is generally about two months before harveſt; and at this time the cows, of which the pooreſt houſemen have generally two or three, and many five or ſix, begin to give milk, which muſt be a great aſſiſtance to the family, particularly to the younger part of it.

In

In the ſummer of the year 1799, the Norwegians appeared to wear a face of plenty and content, while their neighbours the Swedes were abſolutely ſtarving; and I particularly remarked, that the ſons of houſemen and the farmers' boys were fatter, larger, and had better calves to their legs, than boys of the ſame age and in ſimilar ſituations in England.

It is alſo without doubt owing to the prevalence of the preventive check to population, as much as to any peculiar healthineſs of the air, that the mortality in Norway is ſo ſmall. There is nothing in the climate or the ſoil, that would lead to the ſuppoſition of its being in any extraordinary manner favourable to the general health of the inhabitants; but as in every country the principal mortality takes place among very young children, the ſmaller number of theſe in Norway, in proportion to the whole population, will naturally occaſion a ſmaller mortality than in other countries, ſuppoſing the climate to be equally healthy.

It may be ſaid, perhaps, and with truth, that one of the principal reaſons of the ſmall mortality in Norway is, that the towns are inconſiderable and few, and that few people are employed in unwholeſome manufactories. In many of the agricultural villages of other countries, where the

the preventive check to population does not prevail in the ſame degree, the mortality is as ſmall as in Norway. But it ſhould be recollected, that the calculation in this caſe is for thoſe particular villages alone; whereas in Norway the calculation of 1 in 48 is for the whole country. The redundant population of theſe villages is diſpoſed of by conſtant emigrations to the towns, and the deaths of a great part of thoſe that are born in the pariſh do not appear in the regiſters. But in Norway all the deaths are within the calculation, and it is clear, that, if more were born than the country could ſupport, a great mortality muſt take place in ſome form or other. If the people were not deſtroyed by diſeaſe, they would be deſtroyed by famine. It is indeed well known, that bad and inſufficient food will produce diſeaſe and death in the pureſt air and the fineſt climate. Suppoſing therefore no great foreign emigration, and no extraordinary increaſe in the reſources of the country, nothing but the more extenſive prevalence of the preventive check to population in Norway can ſecure to her a ſmaller mortality than in other countries, however pure her air may be, or however healthy the employments of her people.

Norway ſeems to have been anciently divided into

into large eſtates or farms, called Gores; and as, according to the law of ſucceſſion, all the brothers divide the property equally, it is a matter of ſurpriſe, and a proof how ſlowly the population has hitherto increaſed, that theſe eſtates have not been more ſubdivided. Many of them are indeed now divided into half gores and quarter gores, and ſome ſtill lower; but it has in general been the cuſtom, on the death of the father, for a commiſſion to value the eſtate at a low rate, and if the eldeſt ſon can pay his brothers' and ſiſters'[a] ſhares, according to this valuation, by mortgaging his eſtate or otherwiſe, the whole is awarded to him: and the force of habit and natural indolence too frequently prompt him, to conduct the farm after the manner of his forefathers, with few or no efforts at improvement.

Another great obſtacle to the improvement of farms in Norway is a law, which is called Odel's right, by which any lineal deſcendant can repurchaſe an eſtate, which had been ſold out of the family, by paying the original purchaſe-money. Formerly collateral as well as lineal deſcendants had this power, and the time was abſolutely unlimited, ſo that the purchaſer could never conſider himſelf as ſecure from

[a] A daughter's portion is the half of a ſon's portion.

claims.

claims. Afterwards the time was limited to twenty years, and in 1771 it was ſtill further limited to ten years, and all the collateral branches were excluded. It muſt however be an uninterrupted poſſeſſion of ten years; for if, before the expiration of this term, a perſon who has a right to claim under the law give notice to the poſſeſſor, that he does not forego his claim, though he is not then in a condition to make the purchaſe, the poſſeſſor is obliged to wait ſix years more, before he is perfectly ſecure. And as in addition to this the eldeſt in the lineal deſcent may reclaim an eſtate, that had been repurchaſed by a younger brother, the law, even in its preſent amended ſtate, muſt be conſidered as a very great bar to improvement; and in its former ſtate, when the time was unlimited and the ſale of eſtates in this way was more frequent, it ſeems as if it muſt have been a moſt complete obſtacle to the melioration of farms, and obviouſly accounts for the very ſlow increaſe of population in Norway for many centuries.

A further difficulty in the way of clearing and cultivating the land ariſes from the fears of the great timber merchants reſpecting the woods. When a farm has been divided among children and grandchildren, as each proprietor has a certain right in the woods, each in general endeavours

endeavours to cut as much as he can; and the timber is thus felled before it is fit, and the woods ſpoiled. To prevent this, the merchants buy large tracts of woods of the farmers, who enter into a contract, that the farm ſhall not be any further ſubdivided or more houſemen placed upon it; at leaſt that, if the number of families be increaſed, they ſhould have no right in the woods. It is ſaid, that the merchants who make theſe purchaſes are not very ſtrict, provided the ſmaller farmers and houſemen do not take timber for their houſes. The farmers who ſell theſe tracts of wood are obliged by law, to reſerve to themſelves the right of paſturing their cattle, and of cutting timber ſufficient for their houſes, repairs, and firing.

A piece of ground round a houſeman's dwelling cannot be encloſed for cultivation, without an application, firſt, to the proprietor of the woods, declaring, that the ſpot is not fit for timber; and afterwards to a magiſtrate of the diſtrict, whoſe leave on this occaſion is alſo neceſſary, probably for the purpoſe of aſcertaining, whether the leave of the proprietor had been duly obtained.

In addition to theſe obſtacles to improved cultivation, which may be conſidered as artificial, the nature of the country preſents an inſuperable obſtacle to a cultivation and popula-

tion

tion in any reſpect proportioned to the ſurface of the ſoil. The Norwegians, though not in a nomadic ſtate, are ſtill in a conſiderable degree in the paſtoral ſtate, and depend very much upon their cattle. The high grounds, that border on the mountains, are abſolutely unfit to bear corn; and the only uſe, to which they can be put, is to paſture cattle upon them for three or four months during the ſummer. The farmers accordingly ſend all their cattle to theſe grounds at this time of the year, under the care of a part of their families; and it is here, that they make all their butter and cheeſe for ſale, or for their own conſumption. The great difficulty is to ſupport their cattle during the long winter, and for this purpoſe it is neceſſary, that a conſiderable proportion of the moſt fertile land in the vallies ſhould be mowed for hay. If too much of it were taken into tillage, the number of cattle muſt be proportionably diminiſhed, and the greateſt part of the higher grounds would become abſolutely uſeleſs; and it might be a queſtion in that caſe, whether the country upon the whole would ſupport a greater population.

Notwithſtanding, however, all theſe obſtacles, there is a very conſiderable capacity of improvement in Norway, and of late years it has been

called into action. I heard it remarked by a profeſſor at Copenhagen, that the reaſon why the agriculture of Norway had advanced ſo ſlowly was, that there were no gentlemen farmers to ſet examples of improved cultivation, and break the routine of ignorance and prejudice in the conduct of farms, that had been handed down from father to ſon for ſucceſſive ages. From what I ſaw of Norway I ſhould ſay, that this want is now in ſome degree ſupplied. Many intelligent merchants, and well informed general officers, are at preſent engaged in farming. In the country round Chriſtiania, very great improvements have taken place in the ſyſtem of agriculture; and even in the neighbourhood of Drontheim the culture of artificial graſſes has been introduced, which, in a country where ſo much winter feed is neceſſary for cattle, is a point of the higheſt importance. Almoſt every where the cultivation of potatoes has ſucceeded, and they are growing more and more into general uſe, though in the diſtant parts of the country they are not yet reliſhed by the common people.

It has been more the cuſtom of late years than formerly to divide farms; and as the vent for commodities in Norway is not perhaps ſufficient, to encourage the complete cultivation of large

large farms, this diviſion of them has probably contributed to the improvement of the land. It ſeems indeed to be univerſally agreed, among thoſe who are in a ſituation to be competent judges, that the agriculture of Norway in general has advanced conſiderably of late years; and the regiſters ſhow, that the population has followed with more than equal pace. On an average of ten years, from 1775 to 1784, the proportion of births to deaths was 141 to 100.[a] But this ſeems to have been rather too rapid an increaſe; as the following year, 1785, was a year of ſcarcity and ſickneſs, in which the deaths conſiderably exceeded the births; and for four years afterwards, particularly in 1789, the exceſs of births was not great. But in the five years from 1789 to 1794, the proportion of births and deaths was nearly 150 to 100.[b]

Many of the moſt thinking and beſt informed perſons expreſs their apprehenſions on this ſub-

[a] Thaarup's Statiſtik der Daniſchen Monarchie, vol. ii, p. 4.

[b] Id. table i, p. 4. In the Tableau Statiſtique des Etats Danois, ſince publiſhed, it appears, that the whole number of births for the five years ſubſequent to 1794 was 138,799, of deaths 94,530, of marriages 34,313. Theſe numbers give the proportion of births to deaths as 146 to 100, of births to marriages as 4 to 1, and of deaths to marriages as 275 to 100. The average proportion of yearly births is ſtated to be $\frac{1}{33}$, and of yearly deaths $\frac{1}{47}$ of the whole population.

ject,

ject, and on the probable reſult of the new regulations reſpecting the enrolments of the army, and the apparent intention of the court of Denmark, to encourage at all events the population. No very unfavourable ſeaſon has occurred in Norway ſince 1785; but it is feared, that, in the event of ſuch a ſeaſon, the moſt ſevere diſtreſs might be felt from the rapid increaſe, that has of late taken place.

Norway is, I believe, almoſt the only country in Europe, where a traveller will hear any apprehenſions expreſſed of a redundant population, and where the danger to the happineſs of the lower claſſes of people from this cauſe is in ſome degree ſeen and underſtood. This obviouſly ariſes from the ſmallneſs of the population altogether, and the conſequent narrowneſs of the ſubject. If our attention were confined to one pariſh, and there were no power of emigrating from it, the moſt careleſs obſerver could not fail to remark, that, if all married at twenty, it would be perfectly impoſſible for the farmers, however carefully they might improve their land, to find employment and food for thoſe that would grow up; but when a great number of theſe pariſhes are added together in a populous kingdom, the largeneſs of the ſubject,

and

and the power of moving from place to place, obſcure and confuſe our view. We loſe ſight of a truth, which before appeared completely obvious; and, in a moſt unaccountable manner, attribute to the aggregate quantity of land a power of ſupporting people beyond compariſon greater than the ſum of all its parts.

CHAP. II.

Of the Checks to Population in Sweden.

SWEDEN is in many reſpects in a ſtate ſimilar to that of Norway. A very large proportion of its population is in the ſame manner employed in agriculture; and in moſt parts of the country the married labourers who work for the farmers, like the houſemen of Norway, have a certain portion of land for their principal maintenance, while the young men and women that are unmarried live as ſervants in the farmers' families. This ſtate of things however is not ſo complete and general as in Norway; and from this cauſe, added to the greater extent and population of the country, the ſuperior ſize of the towns, and the greater variety of employment, it has not occaſioned in the ſame degree the prevalence of the preventive check to population; and conſequently the poſitive check has operated with more force, or the mortality has been greater.

According

According to a paper publiſhed by M. Wargentin in the *Mémoires abrégés de l'Académie Royale des Sciences de Stockholm,*[a] the yearly average mortality in all Sweden, for nine years ending in 1663, was to the population as 1 to $34\frac{3}{4}$.[b] M. Wargentin furniſhed Dr. Price with a continuance of theſe tables, and an average of 21 years gives a reſult of 1 to $34\frac{1}{7}$, nearly the ſame.[c] This is undoubtedly a very great mortality, conſidering the large proportion of the population in Sweden, which is employed in agriculture. It appears from ſome calculations in Cantzlaer's account of Sweden, that the inhabitants of the towns are to the inhabitants of the country only as 1 to 13;[d] whereas in well-peopled countries the proportion is often as 1 to 3, or above.[e] The ſuperior mortality of towns therefore could not much affect the general proportion of Sweden.

[a] 1 vol. 4to, printed at Paris, 1772. [b] Id p. 27.

[c] Price's Obſerv. on Reverſ. Paym. vol. ii, p. 126.

[d] Mémoires pour ſervir à la connoiſſance des affaires politiques et économiques du Royaume de Suède, 4to, 1776, ch. vi, p. 187. This work is conſidered as very correct in its information, and is in great credit at Stockholm.

[e] Suſſmilch's Gottliche Ordnung, vol. i, c. ii, ſect. xxxiv, edit. 1798.

The average mortality of villages according to Suſſmilch is 1 in 40.[a] In Pruſſia and Pomerania, which include a number of great and unhealthy towns, and where the inhabitants of the towns are to the inhabitants of the country as 1 to 4, the mortality is leſs than 1 in 37.[b] The mortality in Norway, as has been mentioned before, is 1 in 48, which is in a very extraordinary degree leſs than in Sweden, though the inhabitants of the towns in Norway bear a greater proportion to the inhabitants of the country than in Sweden.[c] The towns in Sweden are indeed larger and more unhealthy than in Norway; but there is no reaſon to think, that the country is naturally more unfavourable to the duration of human life. The mountains of Norway are in general not habitable. The only peopled parts of the country are the vallies. Many of theſe vallies are deep and narrow clefts in the mountains; and the cultivated ſpots in the bottom, ſurrounded as they are by almoſt perpendicular cliffs of a prodigious

[a] Suſſmilch's Gottliche Ordnung, vol. i, ch. ii, ſect. xxxv, p. 91. [b] Id. vol. iii, p. 60.

[c] Thaarup's Statiſtik der Daniſchen Monarchie, vol. ii, tab. ii, p. 5. 1765.

height,

height,[a] which intercept the rays of the ſun for many hours, do not ſeem as if they could be ſo healthy as the more expoſed and drier ſoil of Sweden.

It is difficult therefore entirely to account for the mortality of Sweden, without ſuppoſing, that the habits of the people, and the continual cry of the government for an increaſe of ſubjects, tend to preſs the population too hard againſt the limits of ſubſiſtence, and conſequently to produce diſeaſes, which are the neceſſary effect of poverty and bad nouriſhment; and this, from obſervation, appears to be really the caſe.

Sweden does not produce food ſufficient for its population. Its annual want in the article of grain, according to a calculation made from the years 1768 and 1772, is 440,000 tuns.[b]

[a] Some of theſe vallies are ſtrikingly pictureſque. The principal road from Chriſtiania to Drontheim leads for nearly 180 Engliſh miles through a continued valley of this kind, by the ſide of a very fine river, which in one part ſtretches out into the extenſive lake Mioſen. I am inclined to believe, that there is not any river in all Europe, the courſe of which affords ſuch a conſtant ſucceſſion of beautiful and Romantic ſcenery. It goes under different names in different parts. The verdure in the Norway vallies is peculiarly ſoft, the foliage of the trees luxuriant, and in ſummer no traces appear of a northern climate.

[b] Mémoires du Royaume de Suède, table xvii, p. 174.

This

This quantity, or near it, has in general been imported from foreign countries, beſide pork, butter, and cheeſe, to a conſiderable amount.[a]

The diſtillation of ſpirits in Sweden is ſuppoſed to conſume above 400,000 tuns of grain; and when this diſtillation has been prohibited by government, a variation in defect appears in the tables of importations;[b] but no great variations in exceſs are obſervable to ſupply the deficiencies in years of ſcanty harveſts, which, it is well known, occur frequently. In years the moſt abundant, when the diſtillation has been free, it is aſſerted, that 388,000 tuns have in general been imported.[c] It follows therefore, that the Swedes conſume all the produce of their beſt years, and nearly 400,000 more; and that in their worſt years their conſumption muſt be diminiſhed by nearly the whole deficiency in their crops. The maſs of the people appears to be too poor, to purchaſe nearly the ſame quantity of corn at a very advanced price. There is no adequate encouragement therefore to corn

[a] Mémoires du Royaume de Suède, table xvii, c. vi, p. 198.

[b] Id. table xlii, p. 418; c. vi, p. 201. I did not find out exactly the meaſure of the Swediſh tun. It is rather leſs than our ſack, or half quarter.

[c] Mémoires du Royaume de Suède, c. vi, p. 201.

merchants,

merchants, to import in great abundance; and the effect of a deficiency of one fourth or one third in the crops is, to oblige the labourer to content himſelf with nearly three fourths or two thirds of the corn which he uſed before, and to ſupply the reſt by the uſe of any ſubſtitutes, which neceſſity, the mother of invention, may ſuggeſt. I have ſaid nearly, becauſe it is difficult to ſuppoſe, that the importations ſhould not be ſomething greater in years of ſcarcity than in common years, though no marked difference of this kind appear in the tables publiſhed by Cantzlaer. The greateſt importation, according to theſe tables, was in the year 1768, when it amounted to 590,265 tuns of grain;[a] but even this greateſt importation is only 150,000 tuns above the average wants of the country; and what is this to ſupply a deficiency of one fourth or one third of a crop? The whole importation is indeed in this reſpect trifling.

The population of Sweden, at the time that Cantzlaer wrote, was about two millions and a half.[b] He allows four tuns of grain to a man.[c] Upon this ſuppoſition the annual wants of Sweden would be ten millions of tuns, and four

[a] Mémoires du Royaume de Suède, table xlii, p. 418.
[b] Id. ch. vi, p. 184. [c] Id. p. 196.

or

or five hundred thouſand would go but a little way in ſupplying a deficiency of two millions and a half, or three millions; and if we take only the difference from the average importation it will appear, that the aſſiſtance, which the Swedes receive from importation in a year of ſcarcity, is perfectly futile.

The conſequence of this ſtate of things is, that the population of Sweden is in a peculiar manner affected by every variation of the ſeaſons; and we cannot be ſurpriſed at a very curious and inſtructive remark of M. Wargentin, that the regiſters of Sweden ſhow, that the births, marriages, and deaths increaſe and decreaſe according to the ſtate of the harveſts. From the nine years of which he had given tables, he inſtances the following:

		Marriages.	Births.	Deaths.
Barren years.	1757	18799	81878	68054
	1758	19584	83299	74370
Abundant years.	1759	23210	85579	62662
	1760	23383	90635	60083[a].

Here it appears, that in the year 1760 the births were to the deaths as 15 to 10; but in the year 1758 only as 11 to 10. By referring to the enumerations of the population in 1757

[a] Mémoires Abrégés de l' Académie de Stockholm, p. 29.

and

and 1760,[a] which M. Wargentin has given, it appears that the number of marriages in the year 1760 in proportion to the whole population was as 1 to 101; in the year 1757, only as 1 to about 124. The deaths in 1760 were to the whole population as 1 to 39; in 1757 as 1 to 32, and in 1758 as 1 to 31.

In ſome obſervations on the Swediſh regiſters, M. Wargentin ſays, that in the unhealthy years about 1 in 29 have died annually, and in the healthy years 1 in 39; and that taking a middle term the average mortality might be conſidered at 1 in 36.[b] But this inference does not appear to be juſt, as a mean between 29 and 39 would give 34; and indeed the tables, which he has himſelf brought forward, contradict an average mortality of 1 in 36, and prove, that it is about 1 in $34\frac{3}{4}$.

The proportion of yearly marriages to the whole population appears to be on an average nearly as 1 to 112, and to vary between the extremes of 1 to 101, and 1 to 124, according to the temporary proſpect of a ſupport for a family. Probably indeed it varies between much greater extremes, as the period from which

[a] Mémoires Abrégés de l'Académie de Stockholm, p. 21, 22.

[b] Id. p. 29.

theſe

theſe calculations are made is merely for nine years.

In another paper, which M. Wargentin publiſhed in the ſame collection, he again remarks, that in Sweden the years which are the moſt fruitful in produce are the moſt fruitful in children.[a]

If accurate obſervations were made in other countries, it is highly probable, that differences of the ſame kind would appear, though not to the ſame extent.[b] With regard to Sweden they clearly prove, that its population has a very ſtrong tendency to increaſe; and that it is not only always ready to follow with the greateſt alertneſs any average increaſe in the means of ſubſiſtence, but that it makes a ſtart forwards at every temporary and occaſional increaſe of food, by which means it is continually going beyond the average increaſe, and is repreſſed by the periodical returns of ſevere want, and the diſeaſes ariſing from it.

Yet notwithſtanding this conſtant and ſtrik-

[a] Mémoires abrégés de l'Acad. de Stockholm, p. 31.

[b] This has been confirmed with regard to England, by the abſtracts of pariſh regiſters which have lately been publiſhed. The years 1795 and 1800 are marked by a diminution of marriages and births, and an increaſe of deaths.

ing

ing tendency to overflowing numbers, ſtrange to ſay! the government and the political economiſts of Sweden are continually calling out for population, population. Cantzlaer obſerves, that the government, not having the power of inducing ſtrangers to ſettle in the country, or of augmenting at pleaſure the number of births, has occupied itſelf ſince 1748 in every meaſure, which appeared proper to increaſe the population of the country.[a] But ſuppoſe that the government really poſſeſſed the power of inducing ſtrangers to ſettle, or of increaſing the number of births at pleaſure, what would be the conſequence? If the ſtrangers were not ſuch as to introduce a better ſyſtem of agriculture, they would either be ſtarved themſelves, or cauſe more of the Swedes to be ſtarved; and if the yearly number of births were conſiderably increaſed, it appears to me perfectly clear from the tables of M. Wargentin, that the principal effect would be merely an increaſe of mortality. The actual population might perhaps even be diminiſhed by it; as, when epidemics have once been generated by bad nouriſhment and crowded houſes, they do not always ſtop when they have taken off the redundant population, but take

[a] Mémoires du Royaume de Suède, c. vi, p. 188.

off

off with it a part, and ſometimes a very conſiderable part, of that which the country might be able properly to ſupport.

In all very northern climates, in which the principal buſineſs of agriculture muſt neceſſarily be compreſſed into the ſmall ſpace of a few ſummer months, it will almoſt inevitably happen, that during this period a want of hands is felt; but this temporary want ſhould be carefully diſtinguiſhed from a real and effectual demand for labour, which includes the power of giving employment and ſupport through the whole year, and not merely for two or three months. The population of Sweden in the natural courſe of its increaſe will always be ready fully to anſwer this effectual demand; and a ſupply beyond it, whether from ſtrangers or an additional number of births, could only be productive of miſery.

It is aſſerted by Swediſh authors, that a given number of men and of days produces in Sweden only a third part of what is produced by the ſame number of each in ſome other countries;[a] and heavy accuſations are in conſequence brought againſt the national induſtry. Of the

[a] Mémoires du Royaume de Suède, (Cantzlaer) ch. vi, p. 191.

general

general grounds for ſuch accuſations, a ſtranger cannot be a competent judge; but in the preſent inſtance it appears to me that more ought to be attributed to the climate and ſoil, than to an actual want of induſtry in the natives. For a large portion of the year their exertions are neceſſarily cramped by the ſeverity of the climate; and during the time when they are able to engage in agricultural operations, the natural indifference of the ſoil, and the extent of ſurface required for a given produce, inevitably employ a great proportional quantity of labour. It is well known in England, that a farm of large extent, conſiſting of a poor ſoil, is worked at a much greater expense for the ſame produce, than a ſmall one of rich land. The natural poverty of the ſoil in Sweden, generally ſpeaking, cannot be denied.

In a journey up the weſtern ſide of the country, and afterwards in croſſing it from Norway to Stockholm, and thence up the eaſtern coaſt to the paſſage over to Finland, I confeſs that I ſaw fewer marks of a want of national induſtry, than I ſhould have expected. As far as I could judge, I very ſeldom ſaw any land uncultivated, which would have been cultivated in England; and I certainly ſaw many ſpots of land in til-

lage, which never would have been touched with a plough here. Theſe were lands in which every five or ten yards there were large ſtones or rocks, round which the plough muſt neceſſarily be turned or be lifted over them; and the one or the other is generally done according to their ſize. The plough is very light, and drawn by one horſe, and in ploughing among the ſtumps of the trees when they are low, the general practice is to lift it over them. The man who holds the plough does this very nimbly, with little or no ſtop to the horſe.

Of the value of thoſe lands for tillage, which are at preſent covered with immenſe foreſts, I could be no judge; but both the Swedes and the Norwegians are accuſed of clearing theſe woods away too precipitately, and without previouſly conſidering what is likely to be the real value of the land when cleared. The conſequence is, that for the ſake of one good crop of rye, which may always be obtained from the manure afforded by the aſhes of the burnt trees, much growing timber is ſometimes ſpoiled, and the land perhaps afterwards becomes almoſt entirely uſeleſs. After the crop of rye has been obtained, the common practice is to turn cattle in upon the graſs, which may accidentally grow up.

up. If the land be naturally good, the feeding of the cattle prevents freſh firs from riſing; but if it be bad, the cattle of courſe cannot remain long in it, and the ſeeds, with which every wind is ſurcharged, ſow the ground again thickly with firs.

On obſerving many ſpots of this kind both in Norway and Sweden, I could not help being ſtruck with the idea, that, though for other reaſons it was very little probable, ſuch appearances certainly made it ſeem poſſible, that theſe countries might have been better peopled formerly than at preſent; and that lands, which are now covered with foreſts, might have produced corn a thouſand years ago. Wars, plagues, or that greater depopulator than either, a tyrannical government, might have ſuddenly deſtroyed or expelled the greateſt part of the inhabitants; and a neglect of the land for twenty or thirty years in Norway or Sweden would produce a very ſtrange difference in the face of the country. But this is merely an idea which I could not help mentioning, but which the reader already knows has not had weight enough with me to make me ſuppoſe the fact in any degree probable.

To return to the agriculture of Sweden. In-

dependently of any deficiency in the national induſtry, there are certainly ſome circumſtances in the political regulations of the country, which tend to impede the natural progreſs of its cultivation. There are ſtill ſome burdenſome corvées remaining, which the poſſeſſors of certain lands are obliged to perform for the domains of the crown.[a] The poſting of the country is undoubtedly very cheap and convenient to the traveller; but is conducted in a manner to occaſion a great waſte of labour to the farmer, both in men and horſes. It is calculated by the Swediſh economiſts, that the labour, which would be ſaved by the abolition of this ſyſtem alone, would produce annually 300,000 tuns of grain.[b] The very great diſtance of the markets in Sweden, and the very incomplete diviſion of labour, which is almoſt a neceſſary conſequence of it, occaſion alſo a great waſte of time and exertion. And if there be no marked want of diligence and activity among the Swediſh peaſants, there is certainly a want of knowledge in the beſt modes of regulating the rotation of their crops, and of manuring and improving their lands.[c]

[a] Mémoires du Royaume de Suède, ch. vi, p. 202.
[b] Id. p. 204. [c] Id. ch. vi.

If

If the government were employed in removing theſe impediments, and in endeavours to encourage and direct the induſtry of the farmers, and circulate the beſt information on agricultural ſubjects, it would do much more for the population of the country, than by the eſtabliſhment of five hundred foundling hoſpitals.

According to Cantzlaer, the principal meaſures in which the government had been engaged, for the encouragement of the population, were the eſtabliſhment of colleges of medicine, and of lying-in and foundling hoſpitals.[a] The eſtabliſhment of colleges of medicine, for the cure of the poor gratis, may, in many caſes, be extremely beneficial, and was ſo probably in the particular circumſtances of Sweden; but the example of the hoſpitals of France, which have the ſame object, may create a doubt whether even ſuch eſtabliſhments are univerſally to be recommended. Lying-in hoſpitals, as far as they have an effect, are probably rather prejudicial than otherwiſe; as, according to the principle on which they are generally conducted, their tendency is certainly to encourage vice. Foundling hoſpitals, whether they attain their profeſſed and immediate object or not, are in every view

[a] Mémoires du Royaume de Suède, ch. vi, p. 188.

hurtful to the ſtate; but the mode in which they operate I ſhall have occaſion to diſcuſs more particularly in another chapter.

The Swediſh government, however, has not been excluſively employed in meaſures of this nature. By an edict in 1776, the commerce of grain was rendered completely free throughout the whole interior of the country; and with regard to the province of Scania, which grows more than its conſumption, exportation free of every duty was allowed.[a] Till this period the agriculture of the ſouthern provinces had been checked by the want of vent for their grain, on account of the difficulty of tranſport, and the abſolute prohibition of ſelling it to foreigners at any price. The northern provinces are ſtill under ſome difficulties in this reſpect, though as they never grow a quantity ſufficient for their conſumption, theſe difficulties are not ſo much felt.[b] It may be obſerved, however, in general, that there is no check more fatal to improving cultivation, than any difficulty in the vent of its produce, which prevents the farmer from being able to obtain in good years a price for his corn not much below the general average.

[a] Mémoires du Royaume de Suède, ch. vi, p. 204. [b] Ibid.

But

But what perhaps has contributed more than any other cauſe to the increaſing population of Sweden is the abolition of a law in 1748, which limited the number of perſons to each henman or farm.[a] The object of this law appears to have been to force the children of the proprietors to undertake the clearing and cultivation of freſh lands, by which it was thought, that the whole country would be ſooner improved. But it appears from experience, that theſe children, being without ſufficient funds for ſuch undertakings, were obliged to ſeek their fortune in ſome other way, and great numbers, in conſequence, are ſaid to have emigrated. A father, may now, however, not only divide his landed property into as many ſhares as he thinks proper; but theſe diviſions are particularly recommended by the government, and conſidering the immenſe ſize of the Swediſh henmans, and the impoſſibility of their being cultivated completely by one family, ſuch diviſions muſt in every point of view be highly uſeful.

The population in Sweden in 1751 was 2,229,661.[b] In 1799, according to an account which I received in Stockholm from pro-

[a] Mémoires du Royaume de Suède, ch. vi. p. 177.

[b] Id. p. 184.

feſſor Nicander, the ſucceſſor to M. Wargentin, it was 3,043,731. This is a very conſiderable addition to the permanent population of the country, which has followed a proportional increaſe in the produce of the ſoil, as the imports of corn are not greater than they were formerly, and there is no reaſon to think, that the condition of the people is on an average worſe.

This increaſe, however, has not gone forwards without periodical checks, which, if they have not for the time entirely ſtopped its progreſs, have always retarded the rate of it. How often theſe checks have recurred during the laſt 50 years, I am not furniſhed with ſufficient data to be able to ſay, but I can mention ſome of them. From the paper of M. Wargentin,[a] already quoted in this chapter, it appears, that the years 1757 and 1758 were barren, and comparatively mortal years. If we were to judge from the increaſed importation of 1768,[b] this would alſo appear to be an unproductive year. According to the additional tables with which M. Wargentin furniſhed Dr. Price, the years 1771, 1772, and 1773, were particularly mortal.[c]

[a] Mémoires de l'Académie de Stockholm, p. 29.

[b] Mémoires du Royaume de Suède, table xlii.

[c] Price's Obſerv. on Reverſ. Pay. vol. ii, p. 125.

The

The year 1789 muſt have been very highly ſo, as in the accounts which I recived from profeſſor Nicander, this year alone materially affected the average proportion of births to deaths for the twenty years ending in 1795. This proportion, including the year 1789, was 100 to 77; but abſtracting it, was 100 to 75; which is a great difference for one year to make in an average of twenty. To conclude the catalogue, the year 1799, when I was in Sweden, muſt have been a very fatal one. In the provinces bordering on Norway, the peaſants called it the worſt that they had ever remembered. The cattle had all ſuffered extremely during the winter, from the drought of the preceding year; and in July, about a month before the harveſt, a conſiderable portion of the people was living upon bread made of the inner bark of the fir, and of dried ſorrel, abſolutely without any mixture of meal to make it more palatable and nouriſhing. The ſallow looks and melancholy countenances of the peaſants betrayed the unwholeſomeneſs of their nouriſhment. Many had died, but the full effects of ſuch a diet had not then been felt. They would probably appear afterwards in the form of ſome epidemic ſickneſs.

The

The patience with which the lower claſſes of people in Sweden bear theſe ſevere preſſures is perfectly aſtoniſhing, and can only ariſe from their being left entirely to their own reſources, and from the belief that they are ſubmitting to the great law of neceſſity, and not to the caprices of their rulers. Moſt of the married labourers, as has been before obſerved, cultivate a ſmall portion of land; and when from an unfavourable ſeaſon their crops fail, or their cattle die, they ſee the cauſe of their want, and bear it as the viſitation of Providence. Every man will ſubmit with becoming patience to evils, which he believes to ariſe from the general laws of nature; but when the vanity and miſtaken benevolence of the government, and the higher claſſes of ſociety, have, by a perpetual interference with the concerns of the lower claſſes, endeavoured to perſuade them, that all the good which they enjoy is conferred upon them by their rulers and rich benefactors, it is very natural, that they ſhould attribute all the evil which they ſuffer to the ſame ſources, and patience under ſuch circumſtances cannot reaſonably be expected. Though to avoid ſtill greater evils, we may be allowed to repreſs this

this impatience by force, if it ſhow itſelf in overt acts, yet the impatience itſelf appears to be clearly juſtified in this caſe; and thoſe are in a great degree anſwerable for its conſequences, whoſe conduct has tended evidently to encourage it.

Though the Swedes had ſupported the ſevere dearth of 1799, with extraordinary reſignation; yet afterwards on an edict of the government to prohibit the diſtillation of ſpirits, it is ſaid, that there were conſiderable commotions in the country. The meaſure itſelf was certainly calculated to benefit the people; and the manner in which it was received affords a curious proof of the different temper, with which people bear an evil ariſing from the laws of nature, or a privation cauſed by the edicts of a government.

The ſickly periods in Sweden, which have retarded the rate of its increaſe in population, appear in general to have ariſen from the unwholeſome nouriſhment, occaſioned by ſevere want. And this want has been cauſed by unfavourable ſeaſons, falling upon a country which was without any reſerved ſtore, either in its general exports, or in the liberal diviſion of food to the labourer in common years; and which

which was therefore peopled fully up to its produce, before the occurrence of the ſcanty harveſt. Such a ſtate of things is a clear proof, that if, as ſome of the Swediſh economiſts aſſert, their country ought to have a population of nine or ten millions,[a] they have nothing further to do than to make it produce food ſufficient for ſuch a number, and they may reſt perfectly aſſured, that they will not want mouths to eat it, without the aſſiſtance of lying-in and foundling hoſpitals.

Notwithſtanding the mortal year of 1789, it appeared from the accounts which I received from profeſſor Nicander, that the general healthineſs of the country had increaſed. The average mortality for the twenty years ending 1795 was 1 in 37, inſtead of 1 in leſs than 35, which had been the average of the preceding twenty years. As the rate of increaſe had not been accelerated in the twenty years ending in 1795, the diminiſhed mortality muſt have been occaſioned by the increaſed operation of the preventive check. Another calculation which I received from the profeſſor, ſeemed to confirm this ſuppoſition. According to M.

[a] Mémoires du Royaume de Suède, ch. vi, p. 196.

Wargentin,

Wargentin, as quoted by Suſſmilch,[a] 5 ſtanding marriages produced yearly 1 child; but in the latter period, the proportion of ſtanding marriages to annual births was as $5\frac{1}{10}$, and ſubſtracting illegitimate children, as $5\frac{3}{10}$ to 1; a proof that in the latter period the marriages had not been quite ſo early and ſo prolific.

[a] Gottliche Ordnung, vol. i, c. vi, ſ. 120, p. 231.

CHAP. III.

Of the Checks to Population in Ruſſia.

THE liſts of births, deaths, and marriages, in Ruſſia, preſents ſuch extraordinary reſults, that it is impoſſible not to receive them with a conſiderable degree of ſuſpicion; at the ſame time the regular manner in which they have been collected, and their agreement with each other in different years, entitle them to attention.

In a paper preſented in 1768, by B. F. Herman, to the academy of Peterſburgh, and publiſhed in the *Nova Acta Academiæ, tom. iv*, a compariſon is made of the births, deaths, and marriages, in the different provinces and towns of the empire, and the following proportions are given:

In Peterſburgh, the births are to the burials, as	-	-	13 to 10
In the government of Moſcow			21 — 10
Diſtrict of Moſcow excepting the town,	-	-	21 — 10
Tver,	-	-	26 — 10

Novogorod,

Novogorod, - -	20 to 10
Pſkovſk, - - -	22 — 10
Reſan, - - -	20 — 10
Veroneſch, - -	29 — 10
Archbiſhopric of Vologda, -	23 — 10
Koſtroma, - - -	20 — 10
Archangel, - -	13 — 10
Tobolſk, - - -	21 — 10
Town of Tobolſk, - -	13 — 10
Reval, - - -	11 — 10
Vologda, - - -	12 — 10

Some of theſe proportions it will be obſerved are extraordinarily high. In Veroneſch, for inſtance, the births are to the deaths nearly as 3 to 1, which is as great a proportion, I believe, as ever was known in America. The average reſult however of theſe proportions has been, in ſome degree, confirmed by ſubſequent obſervations. Mr. Tooke, in his View of the Ruſſian Empire, makes the general proportion of births to burials throughout the whole country, as 225 to 100,[a] which is 2 and $\frac{1}{4}$ to 1; and this proportion is taken from the liſts of 1793.[b]

From the number of yearly marriages, and yearly births, M. Herman draws the following concluſions:

[a] Vol. ii, b. iii, p. 162. [b] Id. p. 145.

In

	children.
In Peterſburgh one marriage yields	4
In the government of Moſcow, about	3
Tver, - - - -	3
Novogorod, - - -	3
Pſkovſk, - - -	3
Reſan, - - - -	3
Veroneſch, - - -	4
Vologda, - - -	4
Koſtroma, - - -	3
Archangel, - - -	4
Reval, - - - -	4
Government of Tobolſk, - -	4
Town of Tobolſk, from 1768 to 1778,	3
. . . . . from 1779 to 1783,	5
. . . . . in 1783, -	6

M. Herman obſerves, that the fruitfulneſs of marriages in Ruſſia does not exceed that of other countries, though the mortality is much leſs, as appears from the following proportions, drawn from a rough calculation of the number of inhabitants in each government:

	Dies annually.
In Peterſburgh, - -	1 in 28
In the government of Moſcow,	1 — 32
Diſtrict of Moſcow, -	1 — 74
Tver, - - -	1 — 75

Novogorod,

	dies annually.
Novogorod, - -	1 in $68\frac{6}{7}$
Pſkoviſk, - -	1 — $70\frac{4}{5}$
Reſan, - -	1 — 50
Veroneſch, - -	1 — 79
Archbiſhopric of Vologda,	1 — 65
Koſtroma, - -	1 — 59
Archangel, - -	1 — $28\frac{1}{7}$
Reval, - -	1 — 29
Government of Tobolſk,	1 — 44
Town of Tobolſk, -	1 — 32
..... in 1783,	1 — $22\frac{1}{4}$

It may be concluded, Mr. Herman ſays, that in the greateſt number of the Ruſſian provinces the yearly mortality is 1 in 60.[a]

This average number is ſo high, and ſome of the proportions in the particular provinces are ſo extraordinary, that it is impoſſible to believe them accurate. They have been nearly confirmed, however, by ſubſequent liſts, which, according to Mr. Tooke, make the general mortality in all Ruſſia 1 in 58.[b] But Mr. Tooke himſelf ſeems to doubt the accuracy of this particular department of the regiſters; and I have

[a] Nova Acta Academiæ, tom. iv.

[b] View of the Ruſſian Empire, vol. ii, b. iii, p. 148.

ſince heard from good authority, that there is reaſon to believe, that the omiſſions in the burials are in all the provinces much greater than the omiſſions in the births; and conſequently that the very great exceſs of births, and very ſmall mortality, are more apparent than real. It is ſuppoſed, that many children, particularly in the Ukraine, are privately interred by their fathers without information to the prieſt. The numerous and repeated levies of recruits take off great numbers, whoſe deaths are not recorded. From the frequent emigrations of whole families to different parts of the empire, and the tranſportation of malefactors to Siberia, great numbers neceſſarily die on journies or in parts where no regular liſts are kept; and ſome omiſſions are attributed to the neglect of the pariſh prieſts, who have an intereſt in recording the births but not the deaths.

To theſe reaſons I ſhould add, that the population of each province is probably eſtimated by the number of boors belonging to each eſtate in it; but it is well known, that a great part of them has leave to reſide in the towns. Their births therefore appear in the province, but their deaths do not. The apparent mortality of the towns is not proportionably increaſed by this emigration, becauſe it is eſtimated according to actual

actual enumeration. The bills of mortality in the towns expreſs correctly the numbers dying out of a certain number known to be actually preſent in theſe towns; but the bills of mortality in the provinces, purporting to expreſs the numbers dying out of the eſtimated population of the province, do really only expreſs the numbers dying out of a much ſmaller population, becauſe a conſiderable part of the eſtimated population is abſent.

In Peterſburg, it appeared by an enumeration in 1784, that the number of males was 126,827, and of females only 65,619.[a] The proportion of males was therefore very nearly double, ariſing from the numbers who came to the town to earn their capitation tax leaving their families in the country, and from the cuſtom among the lords of retaining a prodigious number of their boors as houſehold ſervants in Peterſburg and Moſcow.

The number of births in proportion to the whole population in Ruſſia is not different from a common average in other countries, being about 1 in 26.[b]

According to the paper of M. Herman already quoted, the proportion of boys dying within the

[a] Memoire par W. L. Krafft, Nova Acta Academiæ, tom. iv.
[b] Tooke's View of Ruſſian Empire, vol. ii, b. iii, p. 147.

firſt year is at Peterſburg $\frac{1}{5}$, in the government of Tobolſk $\frac{1}{10}$, in the Town of Tobolſk $\frac{1}{3}$, in the Archbiſhopric of Vologda $\frac{1}{14}$, in Novogorod $\frac{1}{11}$, in Voroneſch $\frac{1}{14}$, in Archangel $\frac{1}{5}$. The very ſmall mortality of infants in ſome of theſe provinces, particularly as the calculation does not ſeem to be liable to much error, makes the ſmallneſs of the general mortality more credible. In Sweden, throughout the whole country, the proportion of infants which dies within the firſt year is $\frac{1}{5}$ or more.[a]

The proportion of yearly marriages in Ruſſia to the whole population is, according to M. Herman, in the towns about 1 in 100, and in the provinces about 1 in 70 or 80. According to Mr. Tooke, in the fifteen governments of which he had liſts, the proportion was 1 in 92.[b]

This is not very different from other countries. In Peterſburgh indeed the proportion was 1 in 140;[c] but this is clearly accounted for, by what has already been ſaid of the extraordinary number of the males in compariſon of the females.

The regiſters for the city of Peterſburg are ſuppoſed to be ſuch as can be entirely depended

[a] Memoires Abrégés de l'Academie de Stockholm, p. 28.

[b] View of Ruſſ. Emp. vol. ii, b. iii, p. 146.

[c] Memoire par W. L. Krafft, Nova Acta Academiæ, tom. iv.

upon;

upon; and theſe tend to prove the general ſalubrity of the climate. But there is one fact recorded in them, which is directly contrary to what has been obſerved in all other countries. This is a much greater mortality of female children than of male. In the period from 1781 to 1785, of 1000 boys born 147 only died within the firſt year, but of the ſame number of girls 310.[a] The proportion is as 10 to 21, which is inconceivable, and muſt indeed have been in ſome meaſure accidental, as in the preceding periods the proportion was only as 10 to 14; but even this is very extraordinary, as it has been generally remarked, that in every ſtage of life, except during the period of childbearing, the mortality among females is leſs than among males. The climate of Sweden does not appear to be very different from that of Ruſſia; and M. Wargentin obſerves, with reſpect to the Swediſh tables, that it appears from them, that the ſmaller mortality of females is not merely owing to a more regular and leſs laborious life, but is a natural law, which operates conſtantly from infancy to old age.[b]

[a] Memoires par W. L. Krafft, Nova Acta Academiæ, tom. iv.
[b] Memoires Abrégés de l'Academie de Stockholm, p. 28.

According to M. Krafft,[a] the half of all that are born at Peterſburgh live to 25; which ſhows a degree of healthineſs in early life very unuſual for ſo large a town; but after twenty, a mortality much greater than in any other town in Europe takes place, which is juſtly attributed to the immoderate uſe of brandy.[b] The mortality between 10 and 15 is ſo ſmall, that only 1 in 47 males and 1 in 29 females die during this period. From 20 to 25 the mortality is ſo great, that 1 in 9 males and 1 in 13 females die. The tables ſhow, that this extraordinary mortality is occaſioned principally by pleuriſies, high fevers, and conſumptions. Pleuriſies deſtroy $\frac{1}{4}$, high fevers $\frac{1}{3}$, and conſumptions $\frac{1}{6}$, of the whole population. The three together take off $\frac{1}{7}$ of all that die.

The general mortality during the period from 1781 to 1785 was, according to M. Krafft, 1 in 37. In a former period it had been 1 in 35, and in a ſubſequent period, when epidemic diſeaſes prevailed, it was 1 in 29.[c] This average mortality is ſmall for a large town; but there is reaſon to think from a paſſage in M. Krafft's

[a] Nova Acta Academiæ, tom. iv.

[b] Tooke's View of the Ruſſian Empire, vol. ii, b. iii, p. 155.

[c] Id. p. 151.

memoir,

memoir,[a] that the deaths in the hoſpitals, the priſons, and in the *maiſon des Enfans trouvés*, are either entirely omitted, or not given with correctneſs; and undoubtedly the inſertion of theſe deaths might make a great difference in the apparent healthineſs of the town.

In the *maiſon des Enfans trouvés* alone the mortality is prodigious. No regular liſts are publiſhed, and verbal communications are always liable to ſome uncertainty. I cannot therefore rely upon the information, which I collected on the ſubject; but from the moſt careful inquiries which I could make of the attendants at the houſe in Peterſburgh, I underſtood, that 100 a month was the common average. In the preceding winter, which was the winter of 1788, it had not been uncommon to bury 18 a day. The average number received in the day is about 10; and though they are all ſent into the country to be nurſed three days after they have been in the houſe, yet, as many of them are brought in a dying ſtate, the mortality muſt neceſſarily be great. The number ſaid to be received appears, indeed, almoſt incredible; but from what I ſaw myſelf, I ſhould

[a] See a note in Tooke's View of Ruſſ. Emp. vol. ii, b. iii, p. 150.

be inclined to believe, that both this and the mortality before mentioned might not be far from the truth. I was at the houſe about noon, and four children had been juſt received, one of which was evidently dying, and another did not ſeem as if it would long ſurvive.

A part of the houſe is deſtined to the purpoſe of a lying in hoſpital, where every woman that comes is received, and no queſtions are aſked. The children which are thus born are brought up by nurſes in the houſe, and are not ſent into the country like the others. A mother, if ſhe chooſe it, may perform the office of nurſe to her own child in the houſe, but is not permitted to take it away with her. A child brought to the houſe may at any time be reclaimed by its parents, if they can prove themſelves able to ſupport it; and all the children are marked and numbered on being received, that they may be known and produced to the parents, when required, who, if they cannot reclaim them, are permitted to viſit them.

The country nurſes receive only two roubles a month, which, as the current paper rouble is ſeldom worth more than half a crown, is only about fifteen pence a week; yet the general expenſes are ſaid to be 100,000 roubles a month. The regular revenues belonging to the inſtitution

tion are not nearly equal to this ſum; but the government takes on itſelf the management of the whole affair, and conſequently bears all the additional expenſes. As children are received without any limit, it is abſolutely neceſſary, that the expenſes ſhould alſo be unlimited. It is evident, that the moſt dreadful evils muſt reſult from an unlimited reception of children, and only a limited fund to ſupport them. Such inſtitutions, therefore, if managed properly, that is, if the extraordinary mortality do not prevent the rapid accumulation of expenſe, cannot exiſt long except under the protection of a very rich government; and even under ſuch protection the period of their failure cannot be very diſtant.

At ſix or ſeven years old the children who have been ſent into the country return to the houſe, where they are taught all ſorts of trades, and manual operations. The common hours of working are from 6 to 12, and from 2 till 4. The girls leave the houſe at 18, and the boys at 20 or 21. When the houſe is too full, ſome of thoſe which have been ſent into the country are not brought back.

The principal mortality, of courſe, takes place among the infants who are juſt received, and the

the children which are brought up in the houſe; but there is a conſiderable mortality among thoſe which are returned from the country, and are in the firmeſt ſtages of life. I was in ſome degree ſurpriſed at hearing this, after having been particularly ſtruck with the extraordinary degree of neatneſs, cleanlineſs, and ſweetneſs, which appeared to prevail in every department. The houſe itſelf had been a palace, and all the rooms were large, airy, and even elegant. I was preſent while 180 boys were dining. They were all dreſſed very neatly; the table-cloth was clean, and each had a ſeparate napkin to himſelf. The proviſions appeared to be extremely good, and there was not the ſmalleſt diſagreeable ſmell in the room. In the dormitories there was a ſeparate bed for each child; the bedſteads were of iron without teſter or curtains, and the coverlids and ſheets particularly clean.

This degree of neatneſs, almoſt inconceivable in a large inſtitution, was to be attributed principally to the preſent empreſs dowager, who intereſted herſelf in all the details of the management, and when at Peterſburgh ſeldom paſſed a week without inſpecting them in perſon. The mortality which takes place in ſpite of all theſe attentions is a clear proof, that the conſtitution

in

in early youth cannot ſupport confinement and work for eight hours in the day. The children had all rather a pale and ſickly countenance, and if a judgment had been formed of the national beauty from the girls and boys in this eſtabliſhment, it would have been moſt unfavourable.

It is evident, that, if the deaths belonging to this inſtitution be omitted, the bills of mortality for Peterſburgh cannot give a repreſentation in any degree near the truth of the real ſtate of the city, with reſpect to healthineſs. At the ſame time it ſhould be recollected, that ſome of the obſervations which atteſt its healthineſs, ſuch as the number dying in a thouſand, &c., are not influenced by this circumſtance; unleſs indeed we ſay, what is perhaps true, that nearly all thoſe who would find any difficulty in rearing their children ſend them to the foundling hoſpital, and the mortality among the children of thoſe who are in eaſy circumſtances, and live in comfortable houſes and airy ſituations, will of courſe be much leſs than a general average taken from all that are born.

The *maiſon des Enfans trouvés* at Moſcow is conducted exactly upon the ſame principle as that at Peterſburgh; and Mr. Tooke gives an account of the ſurpriſing loſs of children, which it

it had ſuſtained in twenty years, from the time of its firſt eſtabliſhment to the year 1786. On this occaſion he obſerves, that if we knew preciſely the number of thoſe who died immediately after reception, or who brought in with them the germe of diſſolution, a ſmall part only of the mortality would probably appear to be fairly attributable to the foundling hoſpital; as none would be ſo unreaſonable as to lay the loſs of theſe certain victims to death to the account of a philanthropical inſtitution, which enriches the country from year to year with an ever-increaſing number of healthy, active, and induſtrious burghers.[a]

It appears to me, however, that the greateſt part of this premature mortality is clearly to be attributed to theſe inſtitutions, miſcalled philanthropical. If any reliance can be placed on the accounts which are given of the infant mortality in the Ruſſian towns, and provinces, it would appear to be unuſually ſmall. The greatneſs of it therefore, at the foundling hoſpitals, may juſtly be laid to the account of inſtitutions which encourage a mother to deſert her child, at the very time when of all others it ſtands moſt in need of her foſtering care. The frail tenure by

[a] View of the Ruſſian Empire, vol. ii, b. iii, p. 201.

which

which an infant holds its life will not allow of a remitted attention, even for a few hours.

The ſurpriſing mortality, which takes place at theſe two foundling hoſpitals of Peterſburgh and Moſcow, which are managed in the beſt poſſible manner, as all who have ſeen them with one conſent aſſert, appears to me incontrovertibly to prove, that the nature of theſe inſtitutions is not calculated to anſwer the immediate end that they have in view; which I conceive to be the preſervation of a certain number of citizens to the ſtate, which might otherwiſe perhaps periſh from poverty or falſe ſhame. It is not to be doubted, that if the children received into theſe hoſpitals had been left to the management of their parents, taking the chance of all the difficulties in which they might be involved, a much greater proportion of them would have reached the age of manhood, and have become uſeful members of the ſtate.

When we look a little deeper into this ſubject, it will appear, that theſe inſtitutions not only fail in their immediate object, but by encouraging, in the moſt marked manner, habits of licentiouſneſs, diſcourage marriage, and thus weaken the main ſpring of population. All the well-informed men with whom I converſed on this

this ſubject at Peterſburgh agreed invariably, that the inſtitution had produced this effect in a ſurpriſing degree. To have a child was conſidered as one of the moſt trifling faults, which a girl could commit. An Engliſh merchant at Peterſburgh told me, that a Ruſſian girl living in his family, under a miſtreſs who was conſidered as very ſtrict, had ſent ſix children to the foundling hoſpital without the loſs of her place.

It ſhould be obſerved, however, that generally ſpeaking ſix children are not common in this kind of intercourſe. Where habits of licentiouſneſs prevail, the births are never in the ſame proportion to the number of people as in the married ſtate; and therefore the diſcouragement to marriage, ariſing from this licentiouſneſs, and the diminiſhed number of births, which is the conſequence of it, will much more than counterbalance any encouragement to marriage from the proſpect held out to parents of diſpoſing of the children which they cannot ſupport.

Conſidering the extrordinary mortality which occurs in theſe inſtitutions, and the habits of licentiouſneſs which they have an evident tendency to create, it may be ſaid perhaps with truth, that, if a perſon wiſhed to check population,

lation, and were not ſolicitous about the means, he could not propoſe a more effectual meaſure, than the eſtabliſhment of a ſufficient number of foundling hoſpitals, unlimited in their reception of children. And with regard to the moral feelings of a nation it is difficult to conceive, that they muſt not be very ſenſibly impaired by encouraging mothers to deſert their offspring, and endeavouring to teach them, that their love for their new-born infants is a prejudice, which it is the intereſt of their country to eradicate. An occaſional child-murder, from falſe ſhame, is ſaved at a very high price, if it can only be done by the ſacrifice of ſome of the beſt and moſt uſeful feelings of the human heart in a great part of the nation.

On the ſuppoſition that foundling hoſpitals attained their propoſed end, the ſtate of ſlavery in Ruſſia would perhaps render them more juſtifiable in that country than in any other; becauſe every child brought up at the foundling hoſpitals becomes a free citizen, and in this capacity is likely to be more uſeful to the ſtate, than if it had merely increaſed the number of ſlaves belonging to an individual proprietor. But in countries not ſimilarly circumſtanced, the moſt complete ſucceſs in inſtitutions of this kind

kind would be a glaring injuſtice to other parts of the ſociety. The true encouragement to marriage is the high price of labour, and an increaſe of employments, which require to be ſupplied with proper hands; but if the principal part of theſe employments, apprenticeſhips, &c., be filled up by foundlings, the demand for labour among the legitimate part of the ſociety muſt be proportionally diminiſhed, the difficulty of ſupporting a family be increaſed, and the beſt encouragement to marriage removed.

Ruſſia has great natural reſources. Its produce is, in its preſent ſtate, above its conſumption, and it wants nothing but greater freedom of induſtrious exertion, and an adequate vent for its commodities in the interior parts of the country, to occaſion an increaſe of population aſtoniſhingly rapid. The principal obſtacle to this is the vaſſalage, or rather ſlavery, of the peaſants, and the ignorance and indolence which almoſt neceſſarily accompany ſuch a ſtate. The fortune of a Ruſſian nobleman is meaſured by the number of boors that he poſſeſſes, which in general are ſaleable like cattle, and not *adſcripti glebæ*. His revenue ariſes from a capitation tax on all the males. When the boors upon an eſtate are increaſing, new diviſions of land are made

made at certain intervals, and either more is taken into cultivation, or the old ſhares are ſubdivided. Each family is awarded ſuch a portion of land as it can properly cultivate, and will enable it to pay the tax. It is evidently the intereſt of the boor not to improve his lands much, and appear to get conſiderably more than is neceſſary to ſupport his family and pay the poll-tax; becauſe the natural conſequence will be, that in the next diviſion which takes place, the farm which he before poſſeſſed will be conſidered as capable of ſupporting two families, and he will be deprived of the half of it. The indolent cultivation that ſuch a ſtate of things muſt produce is eaſily conceivable. When a boor is deprived of much of the land which he had before uſed, he makes complaints of inability to pay his tax, and demands permiſſion for himſelf or his ſons to go and earn it in the towns. This permiſſion is in general eagerly ſought after, and is granted without much difficulty by the ſeigneurs, in conſideration of a ſmall increaſe of the poll-tax. The conſequence is, that the lands in the country are left half-cultivated, and the genuine ſpring of population impaired in its ſource.

A Ruſſian nobleman at Peterſburgh, of whom

I aſked ſome queſtions reſpecting the management of his eſtate, told me, that he never troubled himſelf to inquire whether it was properly cultivated or not, which he ſeemed to conſider as a matter in which he was not in the ſmalleſt degree concerned. *Cela m' eſt égal*, ſays he, *cela me fait ni bien ni mal.* He gave his boors permiſſion to earn their tax how and where they liked, and as long as he received it he was ſatisfied. But it is evident, that by this kind of conduct he ſacrificed the future population of his eſtate, and the conſequent future increaſe of his revenues, to conſiderations of indolence and preſent convenience.

It is certain, however, that of late years many noblemen have attended more to the improvement and population of their eſtates, inſtigated principally by the precepts and examples of the empreſs Catharine, who made the greateſt exertions to advance the cultivation of the country. Her immenſe importations of German ſettlers not only contributed to people her ſtate with free citizens, inſtead of ſlaves, but what was perhaps of ſtill more importance, to ſet an example of induſtry, and of modes of directing that induſtry, totally unknown to the Ruſſian peaſants.

Theſe

Theſe exertions have been crowned, upon the whole, with great ſucceſs; and it is not to be doubted, that, during the reign of the late empreſs, and ſince, a very conſiderable increaſe of cultivation and of population has been going forward in almoſt every part of the Ruſſian empire.

In the year 1763, an enumeration of the people, eſtimated by the poll-tax, gave a population of 14,726,696; and the ſame kind of enumeration in 1783 gave a population of 25,677,000, which, if correct, ſhows a very extraordinary increaſe; but it is ſuppoſed, that the enumeration in 1783 was more correct and complete than the one in 1763. Including the provinces not ſubject to the poll-tax, the general calculation for 1763 was 20,000,000, and for 1796 36,000,000[a].

In a ſubſequent edition of Mr. Tooke's View of the Ruſſian Empire, a table of the births, deaths, and marriages, in the Greek church, is given for the year 1799, taken from a reſpectable German periodical publication, and faithfully extracted from the general returns received by the ſynod. It contains all the eparchies except Bruzlaw, which, from the peculiar difficulties

[a] Tooke's View of the Ruſſian Empire, vol. ii, book iii, ſect. i, p. 126, et ſeq.

attending a correct liſt of mortality in that eparchy, could not be inſerted. The general reſults are,

	Males.	Females.	Totals.
Births,	531,015.	460,900.	991,915.
Deaths,	275,582.	264,807.	540,389.
	Marriages, 257,513.		
Overplus of births,	Males, 255,432.		451,525.
	Females, 196,093.		

To eſtimate the population Mr. Tooke multiplies the deaths by 58. But as this table has the appearance of being more correct than thoſe which preceded it, and as the proportion of deaths compared with the births is greater in this table than in the others, it is probable that 58 is too great a multiplier. It may be obſerved, that in this table the births are to the deaths nearly as 183 to 100, the births to marriages as 385 to 100, and the deaths to the marriages as 210 to 100.

Theſe are all more probable proportions than the reſults of the former tables.

CHAP.

CHAP. IV.

Of the Checks to Population in the middle parts of Europe.

I HAVE dwelt longer on the northern ſtates of Europe than their relative importance might, to ſome, appear to demand, becauſe their internal economy is in many reſpects eſſentially different from our own, and a perſonal though ſlight acquaintance with theſe countries has enabled me to mention a few particulars which have not yet been before the public. In the middle parts of Europe, the diviſion of labour, the diſtribution of employments, and the proportion of the inhabitants of towns to the inhabitants of the country differ ſo little from what is obſervable in England, that it would be in vain to ſeek for the checks to their population in any peculiarity of habits and manners ſufficiently marked to admit of deſcription. I ſhall therefore endeavour to direct the reader's attention principally to ſome inferences drawn from the liſts of births, marriages, and deaths in different countries; and theſe data will, in many important points,

give us more information reſpecting their internal economy than we could receive from the moſt obſerving traveller.

One of the moſt curious and inſtructive points of view, in which we can conſider liſts of this kind, appears to me to be the dependence of the marriages on the deaths. It has been juſtly obſerved by Monteſquieu, that, wherever there is a place for two perſons to live comfortably, a marriage will certainly enſue:[a] but in moſt of the countries in Europe, in the preſent ſtate of their population, experience will not allow us to expect any ſudden and great increaſe in the means of ſupporting a family. The place therefore for the new marriage muſt, in general, be made by the diſſolution of an old one; and we find in conſequence, that except after ſome great mortality, from whatever cauſe it may have proceeded, or ſome ſudden change of policy peculiarly favourable to cultivation and trade, the number of annual marriages is regulated principally by the number of annual deaths. They reciprocally influence each other. There are few countries, in which the common people have ſo much foreſight, as to defer marriage till they have a fair proſpect of being able to ſupport

[a] Eſprit des Loix, liv. xxii, c. x.

properly

properly all their children. Some of the mortality, therefore, in almoſt every country, is forced by the too great frequency of marriage; and in every country a great mortality, whether ariſing principally from this cauſe, or occaſioned by the number of great towns and manufactories, and the natural unhealthineſs of the ſituation, will neceſſarily produce a great frequency of marriage.

A moſt ſtriking exemplification of this obſervation occurs in the caſe of ſome villages in Holland. Suſſmilch has calculated the mean proportion of annual marriages compared with the number of inhabitants as between 1 in 107 and 1 in 113, in countries which have not been thinned by plagues or wars, or in which there is no ſudden increaſe in the means of ſubſiſtence.[a] And Crome, a later ſtatiſtical writer, taking a mean between 1 in 92 and 1 in 122, eſtimates the average proportion of marriages to inhabitants as 1 to 108.[b] But in the regiſters of 22 Dutch villages, the accuracy of which, according to Suſſmilch, there is no reaſon to doubt, it appears that out of 64 perſons there is

[a] Suſſmilch, Göttliche Ordnung, vol. i, c. iv, ſect. lvi, p. 126.

[b] Crome, ueber die Gröſſe und Bevölkerung der Europ. Staaten, p. 88, Leipſ. 1785.

1 annual marriage.[a] This is a moſt extraordinary deviation from the mean proportion. When I firſt ſaw this number mentioned, not having then adverted to the mortality in theſe villages, I was much aſtoniſhed; and very little ſatisfied with Suſſmilch's attempt to account for it, by talking of the great number of trades, and the various means of getting a livelihood in Holland;[b] as it is evident, that the country having been long in the ſame ſtate, there would be no reaſon to expect any great yearly acceſſion of new trades and new means of ſubſiſtence, and the old ones would of courſe all be full. But the difficulty was immediately ſolved, when it appeared, that the mortality was between 1 in 22 and 1 in 23,[c] inſtead of being 1 in 36, as is uſual when the marriages are in the proportion of 1 to 108. The births and deaths were nearly equal. The extraordinary number of marriages was not cauſed by the opening of any new ſources of ſubſiſtence, and therefore produced no increaſe

[a] Suſſmilch, Göttliche Ordnung, vol. i, c. iv, ſect. lviii. p. 127. Such a proportion of marriages could not poſſibly be ſupplied in a country like Holland, from the births within the territory, but muſt be cauſed principally by the influx of foreigners: and it is known that ſuch an influx, before the revolution, was conſtantly taking place. Holland, indeed, has been called the grave of Germany.

[b] Id. p. 128. [c] Id. c. ii, ſect. xxxvi, p. 92.

of

of population. It was merely occaſioned by the rapid diſſolution of the old marriages by death, and the conſequent vacancy of ſome employment, by which a family might be ſupported.

It might be a queſtion in this caſe, whether the too great frequency of marriage, that is, the preſſure of the population too hard againſt the limits of ſubſiſtence, contributed moſt to produce the mortality; or the mortality occaſioned naturally by the employments of the people, and unhealthineſs of the country, the frequency of marriage. In the preſent inſtance I ſhould, without doubt, incline to the latter ſuppoſition; particularly as it ſeems to be generally agreed, that the common people in Holland before the revolution were, upon the whole, in a good ſtate. The great mortality probably aroſe partly from the natural marſhineſs of the ſoil and the number of canals, and partly from the very great proportion of the people engaged in ſedentary occupations, and the very ſmall number in the healthy employments of agriculture.

A very curious and ſtriking contraſt to theſe Dutch villages, tending to illuſtrate the preſent ſubject, will be recollected in what was ſaid reſpecting the ſtate of Norway. In Norway, the mortality is 1 in 48, and the marriages are 1 in 130. In the Dutch villages, the mortality 1 in

23,

23, and the marriages 1 in 64. The difference both in the marriages and deaths is above double. They maintain their relative proportions in a very exact manner, and ſhow how much the deaths and marriages mutually depend upon each other; and that, except where ſome ſudden ſtart in the agriculture of a country enlarges the means of ſubſiſtence, an increaſe of marriages will only produce an increaſe of mortality, and *vice verſâ*.

In Ruſſia this ſudden ſtart in agriculture has in great meaſure taken place; and conſequently, though the mortality is very ſmall, yet the proportion of marriages is not ſo. But in the progreſs of the population of Ruſſia, if the proportion of marriages remain the ſame as at preſent, the mortality will inevitably increaſe; or if the mortality remain nearly the ſame, the proportion of marriages will diminiſh.

Suſſmilch has produced ſome ſtriking inſtances of this gradual decreaſe in the proportional number of marriages, in the progreſs of a country to a fuller population, and a more complete occupation of all the means of gaining a livelihood.

In the town of Halle, in the year 1700, the number of annual marriages was to the whole population as 1 to 77. During the courſe of the

the 55 following years, this proportion changed gradually, according to Suſſmilch's calculation to 1 in 167.[a] This is a moſt extraordinary difference, and, if the calculation were quite accurate, would prove to what a degree the check to marriage had operated, and how completely it had meaſured itſelf to the means of ſubſiſtence. As however the number of people is eſtimated by calculation, and not taken from enumerations, this very great difference in the proportions may not be perfectly correct, or may be occaſioned in part by other cauſes.

In the town of Leipſic, in the year 1620, the annual marriages were to the population as 1 to 82: from the year 1741 to 1756, they were as 1 to 120.[b]

In Augſburgh, in 1510, the proportion of marriages to the population was as 1 to 86; in 1750, as 1 to 123.[c]

In Dantzic, in the year 1705, the proportion was as 1 to 89; in 1745 as 1 to 118.[d]

In the dukedom of Magdeburgh, in 1700, the proportion was as 1 to 87; from 1752 to 1755, as 1 to 125.

[a] Suſſmilch, Göttliche Ordnung, vol. i, c. iv, ſect. lxii, p. 132. [b] Id. ſect. lxiii, p. 134.
[c] Id. ſect. lxiv, p. 134. [d] Id. ſect. lxv, p. 135.

In

In the principality of Halberſtadt, in 1690, the proportion was as 1 to 88; in 1756, as 1 to 112.

In the dukedom of Cleves, in 1705, the proportion was 1 to 83; in 1755, 1 to 100.

In the Churmark of Brandenburgh, in 1700, the proportion was 1 to 76; in 1755, 1 to 108.[a]

More inſtances of this kind might be produced; but theſe are ſufficient to ſhow, that in countries, where from a ſudden increaſe in the means of ſubſiſtence, ariſing either from a great previous mortality, or from improving cultivation and trade, room has been made for a number of marriages much beyond thoſe diſſolved by death, this additional number will annually decreaſe, in proportion as all the new employments are filled up, and there is no further room for an increaſing population.

But in countries which have long been fully peopled, and in which no new ſources of ſubſiſtence are opening, the marriages, being regulated principally by the deaths, will generally bear nearly the ſame proportion to the whole population, at one period as at another. And the ſame conſtancy will take place, even in

[a] Suſſmilch, Göttliche Ordnung, vol. i, c. iv, ſect. lxxi, p. 140.

countries

countries where there is an annual increaſe in the means of ſubſiſtence, provided this increaſe be uniform and permanent. Suppoſing it to be ſuch, as for half a century to allow every year of a fixed proportion of marriages beyond thoſe diſſolved by death, the population would then be increaſing, and perhaps rapidly; but it is evident, that the proportion of marriages to the whole population might remain the ſame during the whole period.

This proportion Suſſmilch has endeavoured to aſcertain in different countries and different ſituations. In the villages of the Churmark of Brandenburgh, 1 marriage out of 109 perſons takes place annually;[a] and the general proportion for agricultural villages he thinks may be taken at between 1 in 108 and 1 in 115.[b] In the ſmall towns of the Churmark, where the mortality is greater, the proportion is 1 to 98:[c] in the Dutch villages mentioned before, 1 to 64: in Berlin 1 to 110:[d] in Paris 1 to 137.[e] According to Crome, in the *unmarrying* cities of Paris and Rome the proportion is only 1 to 160.[f]

All general proportions however, of every

[a] Suſſmilch, Göttliche Ordnung, vol. i, c. iv. ſect. lvi, p. 125. [b] Id. ſect. lxxv, p. 147. [c] Id. ſect. lx, p. 129. [d] Ibid. [e] Id. ſect. lxix, p. 137. [f] Crome, ueber die Gröſſe und Bevölkerung der Europaiſchen Staaten, p. 89.

kind,

kind, ſhould be applied with conſiderable caution, as it ſeldom happens, that the increaſe of food and of population is uniform; and when the circumſtances of a country are varying, either from this cauſe, or from any change in the habits of the people with reſpect to prudence and cleanlineſs, it is evident, that a proportion which is true at one period will not be ſo at another.

Nothing is more difficult, than to lay down rules on theſe ſubjects that do not admit of exceptions. Generally ſpeaking, it might be taken for granted, that an increaſed facility in the means of gaining a livelihood, either from a great previous mortality, or from improving cultivation and trade, would produce a greater proportion of annual marriages; but this effect might not perhaps follow. Suppoſing the people to have been before in a very depreſſed ſtate, and much of the mortality to have ariſen from the want of foreſight, which uſually accompanies ſuch a ſtate, it is poſſible, that the ſudden improvement of their condition might give them more of a decent and proper pride; and the conſequence would be, that the proportional number of marriages might remain nearly the ſame, but they would all rear more of their children, and the additional population that was wanted would

would be ſupplied by a diminiſhed mortality, inſtead of an increaſed number of births.

In the ſame manner, if the population of any country had been long ſtationary, and would not eaſily admit of an increaſe, it is poſſible, that a change in the habits of the people, from improved education, or any other cauſe, might diminiſh the proportional number of marriages; but as fewer children would be loſt in infancy from the diſeaſes conſequent on poverty, the diminution in the number of marriages would be balanced by the diminiſhed mortality, and the population would be kept up to its proper level by a ſmaller number of births.

Such changes therefore in the habits of a people ſhould evidently be taken into conſideration.

The moſt general rule that can be laid down on this ſubject is perhaps, that any *direct* encouragements to marriage muſt be accompanied by an increaſed mortality. The natural tendency to marriage is in every country ſo great, that without any encouragements whatever a proper place for a marriage will always be filled up. Such encouragements therefore muſt be either perfectly futile, or produce a marriage where there is not a proper place for one; and the conſequence muſt neceſſarily be

be increaſed poverty and mortality. Monteſquieu, in his Lettres Perſannes, ſays, that in the paſt wars of France, the fear of being inrolled in the militia tempted a great number of young men to marry, without the proper means of ſupporting a family, and the effect was the birth of a crowd of children, "que l'on cherche encore en France, et que la misère, la famine, et les maladies en ont fait diſparoître."[a]

After ſo ſtriking an illuſtration of the neceſſary effects of direct encouragements to marriage, it is perfectly aſtoniſhing, that in his Eſprit des Loix he ſhould ſay, that Europe is ſtill in a ſtate to require laws, which favour the propagation of the human ſpecies.[b]

Suſſmilch adopts the ſame ideas; and though he contemplates the caſe of the number of marriages coming neceſſarily to a ſtand, when the food is not capable of further increaſe, and examines ſome countries in which the number of contracted marriages is exactly meaſured by the number diſſolved by death, yet he ſtill thinks, that it is one of the principal duties of government to attend to the number of marriages. He cites the examples of Auguſtus and Trajan, and thinks, that a prince or a ſtateſman would really merit the name of father of his people, if from the

[a] Lettre cxxii. [b] Eſprit des Loix, liv. xxiii, c. xxvi.

proportion

proportion of 1 to 120 or 125, he could increaſe the marriages to the proportion of 1 to 80 or 90.[a] But as it clearly appears from the inſtances which he himſelf produces, that in countries which have been long tolerably well peopled, death is the moſt powerful of all the encouragements to marriage; the prince or ſtateſman, who ſhould ſucceed in thus greatly increaſing the number of marriages, might, perhaps, deſerve much more juſtly the title of deſtroyer, than father of his people.

The proportion of yearly births to the whole population muſt evidently depend principally upon the proportion of the people marrying annually; and therefore in countries which will not admit of a great increaſe of population, muſt, like the marriages, depend principally on the deaths. Where an actual decreaſe of population is not taking place, the births will always ſupply the vacancies made by death, and exactly ſo much more as the increaſing agriculture and trade of the country will admit. In almoſt every part of Europe, during the intervals of the great plagues, epidemics, or deſtructive wars, with which it is occaſionally viſited, the births exceed

[a] Suſſmilch, Göttliche Ordnung, vol. i, c. iv, ſect. lxxviii, p. 151.

the deaths; but as the mortality varies very much in different countries and ſituations, the births will be found to vary in the ſame manner, though from the exceſs of births above deaths, which moſt countries can admit, not in the ſame degree.

In 39 villages of Holland, where the deaths are about 1 in 23, the births are alſo about 1 in 23[a]. In 15 villages round Paris, the births bear the ſame, or even a greater proportion to the whole population, on account of a ſtill greater mortality: the births are 1 in $22\frac{7}{10}$, and the deaths the ſame.[b] In the ſmall towns of Brandenburgh, which are in an increaſing ſtate, the mortality is 1 in 29, and the births 1 in $24\frac{7}{10}$.[c] In Sweden, where the mortality is about 1 in 35, the births are 1 in 28.[d] In 1056 villages of Brandenburgh, in which the mortality is about 1 in 39 or 40, the births are about 1 in 30.[e] In Norway, where the mortality is 1 in 48, the births are 1 in 34.[f] In all theſe inſtances, the births are evidently meaſured by the deaths, after making a proper allowance for the

[a] Suſſmilch, Göttliche Ordnung, vol. i, c. vi, ſ. cxvi, p. 225.
[b] Ibid. and c. ii, ſ. xxxvii, p. 93. [c] Id. c. ii, ſ. xxviii. p. 80, and c. vi, ſ. cxvi, p. 225. [d] Id. c. vi, ſ. cxvi, p. 225.
[e] Ibid. [f] Thaarup's Statiſtik, vol. ii, p. 4.

exceſs

exceſs of births, which the ſtate of each country will admit. In Ruſſia this allowance muſt be great, as although the mortality may perhaps be taken as only 1 in 48 or 50, the births are as high as 1 in 26, owing to the preſent rapid increaſe of the population.

Statiſtical writers have endeavoured to obtain a general meaſure of mortality for all countries taken together; but, if ſuch a meaſure could be obtained, I do not ſee what good purpoſe it could anſwer. It would be but of little uſe in aſcertaining the population of Europe, or of the world; and it is evident, that in applying it to particular countries or particular places, we might be led into the groſſeſt errors. When the mortality of the human race, in different countries and different ſituations, varies ſo much as from 1 in 20 to 1 in 60, no general average could be uſed with ſafety in a particular caſe, without ſuch a knowledge of the circumſtances of the country, with reſpect to the number of towns, the habits of the people, and the healthineſs of the ſituation, as would probably ſuperſede the neceſſity of reſorting to any general proportion, by the knowledge of the particular proportion ſuited to the country.

There is one leading circumſtance however

affecting the mortality of countries, which may be conſidered as very general, and which is, at the ſame time, completely open to obſervation. This is the number of towns, and the proportion of town to country inhabitants. The unfavourable effects of cloſe habitations, and ſedentary employments, on the health, are univerſal; and therefore on the number of people living in this manner, compared with the number employed in agriculture, will much depend the general mortality of the ſtate. Upon this principle it has been calculated, that when the proportion of the people in the towns to thoſe in the country is as 1 to 3, then the mortality is about 1 in 36: which riſes to 1 in 35, or 1 in 33, when the proportion of townſmen to villagers is 2 to 5, or 3 to 7; and falls below 1 in 36, when this proportion is 2 to 7, or 1 to 4. On theſe grounds the mortality in Pruſſia is 1 in 38; in Pomerania, 1 in $37\frac{1}{2}$; in the Neumark, 1 in 37; in the Churmark, 1 in 35; according to the liſts for 1756.[a]

The neareſt average meaſure of mortality for all countries, taking towns and villages together, is, according to Suſſmilch, 1 in 36.[b] But Crome

[a] Suſſmilch, Göttliche Ordnung, vol. iii, p. 60.

[b] Vol. i, c. ii, ſ. xxxv, p. 91.

thinks

thinks that this meaſure, though it might poſſibly have ſuited the time at which Suſſmilch wrote, is not correct at preſent, when in moſt of the ſtates of Europe both the number and the ſize of towns have increaſed.[a] He ſeems to be of opinion indeed, that this mortality was rather below the truth in Suſſmilch's time, and that now 1 in 30 would be found to be nearer the average meaſure. It is not improbable, that Suſſmilch's proportion is too ſmall, as he had a little tendency, with many other ſtatiſtical writers, to throw out of his calculations epidemic years; but Crome has not advanced proofs ſufficient to eſtabliſh a general meaſure of mortality in oppoſition to that propoſed by Suſſmilch. He quotes Buſching, who ſtates the mortality of the whole Pruſſian monarchy to be 1 in 30.[b] But it appears, that this inference was drawn from liſts for only three years, a period much too ſhort to determine any general average. This proportion, for the Pruſſian monarchy, is indeed completely contradicted by ſubſequent obſervations mentioned by Crome. According

[a] Crome, über die Gröſſe and Bevölkerung der Europaiſchen Staaten, p. 116.

[b] Crome, über die Bevölkerung der Europaiſch. Staat. p. 118.

to liſts for five years, ending in 1784, the mortality was only 1 in 37.[a] During the ſame periods, the births were to the deaths as 131 to 100. In Sileſia the mortality from 1781 to 1784 was 1 in 30; and the births to deaths as 128 to 100. In Gelderland the mortality from 1776 to 1781 was 1 in 27, and the births 1 in 26. Theſe are the two provinces of the monarchy in which the mortality is the greateſt. In ſome others it is very ſmall. From 1781 to 1784 the average mortality in Neufchatel and Ballengin was only 1 in 44, and the births 1 in 31. In the principality of Halberſtadtz, from 1778 to 1784, the mortality was ſtill leſs, being only 1 in 45 or 46, and the proportion of births to deaths 137 to 100.[b]

The general concluſion that Crome draws is, that the ſtates of Europe may be divided into three claſſes, to which a different meaſure of mortality ought to be applied. In the richeſt and moſt populous ſtates, where the inhabitants of the towns are to the inhabitants of the country in ſo high a proportion as 1 to 3, the mortality may be taken as 1 in 30. In thoſe countries which are in a middle ſtate with regard to population and cultivation, the

[a] Crome, über die Bevölkerung der Europaiſch. Staat. p. 120. [b] Id. p. 122.

mortality

mortality may be conſidered as 1 in 32. And in the thinly-peopled northern ſtates, Suſſmilch's proportion of 1 in 36 may be applied.[a]

Theſe proportions ſeem to make the general mortality too great, even after allowing epidemic years to have their full effect in the calculations. The improved habits of cleanlineſs, which appear to have prevailed of late years in moſt of the towns of Europe, have probably, in point of ſalubrity, more than counterbalanced their increaſed ſize.

[a] Crome's Europaiſchen Staaten, p. 127.

CHAP. V.

Of the Checks to Population in Switzerland.

THE ſituation of Switzerland is in many reſpects ſo different from the other ſtates of Europe; and ſome of the facts that have been collected reſpecting it are ſo curious, and tend ſo ſtrongly to illuſtrate the general principles of this work, that it ſeems to merit a ſeparate conſideration.

About 35 or 40 years ago, a great and ſudden alarm appears to have prevailed in Switzerland, reſpecting the depopulation of the country; and the tranſactions of the Economical Society of Berne, which had been eſtabliſhed ſome years before, were crowded with papers deploring the decay of induſtry, arts, agriculture, and manufactures, and the imminent danger of a total want of people. The greater part of theſe writers conſidered the depopulation of the country as a fact ſo obvious, as not to require proof. They employed themſelves, therefore, chiefly

chiefly in propoſing remedies, and among others, the importation of midwives, the eſtabliſhment of foundling hoſpitals, the portioning of young virgins, the prevention of emigration, and the encouragement of foreign ſettlers.[a]

A paper containing very valuable materials was, however, about this time publiſhed by a Monſ. Muret, miniſter of Vevey, who, before he proceeded to point out remedies, thought it neceſſary to ſubſtantiate the exiſtence of the evil. He made a very laborious and careful reſearch into the regiſters of different pariſhes, up to the time of their firſt eſtabliſhment, and compared the number of births, which had taken place during three different periods of 70 years each, the firſt ending in 1620, the ſecond in 1690, and the third in 1760.[b] Finding, upon this compariſon, that the number of births was rather leſs in the ſecond than in the firſt period, (and by the help of ſuppoſing ſome omiſſions in the ſecond period, and ſome redundances in the third,) that the number of births in the third was alſo leſs than in the ſecond, he conſidered the evidence for a continued depopulation of

[a] See the different Memoirs for the year 1766.

[b] Mémoires, &c. par la Société Economique de Berne. Année 1766, première partie, p. 15 et ſeq. octavo. Berne.

the

the country from the year 1550 as incontrovertible.

Admitting all the premiſes, the concluſion is not perhaps ſo certain, as he imagined it to be: and from other facts which appear in his memoir, I am ſtrongly diſpoſed to believe, that Switzerland, during this period, came under the caſe ſuppoſed in the laſt chapter; and that the improving habits of the people with reſpect to prudence, cleanlineſs, &c., had added gradually to the general healthineſs of the country, and by enabling them to rear up to manhood a greater proportion of their children, had furniſhed the requiſite increaſe of population with a ſmaller number of births. Of courſe, the proportion of annual births to the whole population, in the latter period, would be leſs than in the former.

From accurate calculations of M. Muret, it appears, that during the laſt period the mortality was extraordinarily ſmall, and the proportion of children reared from infancy to puberty extraordinarily great.[a] In the former periods, this could not have been the caſe in the ſame degree. M. Muret himſelf obſerves, that "The ancient

[a] Mémoires, &c. par la Société Economique de Berne, table xiii, p. 120. Année 1766.

"depopu-

"depopulation of the country was to be attri-
"buted to the frequent plagues, which, in for-
"mer times, deſolated it;" and adds, "if it
"could ſupport itſelf, notwithſtanding the fre-
"quency of ſo dreadful an evil, it is a proof of
"the goodneſs of the climate, and of the cer-
"tain reſources which the country could fur-
"niſh, for a prompt recovery of its popula-
"tion."[a] He neglects to ſupply this obſervation as he ought, and forgets that ſuch a prompt repeopling could not take place without an unuſual increaſe of births, and that to enable a country to ſupport itſelf againſt ſuch a ſource of deſtruction, a greater proportion of births to the whole population would be neceſſary than at other times.

In one of his tables he gives a liſt of all the plagues that had prevailed in Switzerland, from which it appears, that this dreadful ſcourge deſolated the country, at ſhort intervals, during the whole of the firſt period, and extended its occaſional ravages to within 22 years of the termination of the ſecond.[b]

It would be contrary to every rule of probability to ſuppoſe, that, during the frequent prevalence of this diſorder, the country could be

[a] Mémoires, &c. par la Société Econ. de Berne. Année 1766, premiére partie, p. 22. [b] Id. table iv, p. 22.

particularly

particularly healthy, and the general mortality extremely ſmall. Let us ſuppoſe it to have been ſuch as at preſent takes place in many other countries, which are exempt from this calamity, about 1 in 32, inſtead of 1 in 45, as in the laſt period. The births would of courſe keep their relative proportion, and inſtead of 1 in 36,[a] be about 1 in 26. In eſtimating the population of the country by the births, we ſhould thus have two very different multipliers for the different periods; and though the abſolute number of births might be greater in the firſt period, yet the fact would by no means imply a greater population.

In the preſent inſtance, the ſum of the births in 17 pariſhes, during the firſt 70 years, is given as 49,860, which annually would be about 712. This, multiplied by 26, would indicate a population of 18,512. In the laſt period, the ſum of the births is given 43,910,[b] which will be about 626 annually. This, multiplied by 36, will indicate a population of 22,536: and if the multipliers be juſt, it will thus appear, that inſtead of the decreaſe which was intended to be proved, there had been a conſiderable increaſe.

[a] Mémoires, &c. par la Société Econ. de Berne. Année 1766, première partie, table i, p. 21. [b] Id. p. 16.

That

That I have not eſtimated the mortality too high during the firſt period, I have many reaſons for ſuppoſing, particularly a calculation reſpecting the neighbouring town of Geneva, in which it appears, that in the 16th century, the probability of life, or the age to which half of the born live, was only 4·883, rather leſs than four years and $\frac{9}{10}$ths; and the mean life 18·511, about 18 years and a half. In the 17th century, the probability of life was 11·607, above 11 years and a half; the mean life 23·358. In the 18th century, the probability of life had increaſed to 27·183, 27 years and nearly a fifth, and the mean life to 32 years and a fifth.[a]

It is highly probable, that a diminution of mortality, of the ſame kind, though perhaps not in the ſame degree, ſhould have taken place in Switzerland; and we know from the regiſters of other countries, which have been already noticed, that a greater mortality naturally produces a greater proportion of births.

Of this dependence of the births on the deaths M. Muret himſelf produces many inſtances; but not being aware of the true principle of po-

[a] See a paper in the Bibliothéque Britannique, publiſhed at Geneva, tom. iv, p. 328.

pulation,

pulation, they only ſerve to aſtoniſh him, and he does not apply them.

Speaking of the want of fruitfulneſs in the Swiſs women, he ſays, that Pruſſia, Brandenburgh, Sweden, France, and indeed every country, the regiſters of which he had ſeen, give a greater proportion of baptiſms to the number of inhabitants, than the Pays de Vaud, where this proportion is only as 1 to 36.[a] He adds, that from calculations lately made in the Lyonois, it appeared, that in Lyons itſelf, the proportion of baptiſms was 1 in 28, in the ſmall towns 1 in 25, and in the pariſhes 1 in 23 or 24. What a prodigious difference, he exclaims, between the Lyonois and the Pays de Vaud, where the moſt favourable proportion, and that only in two ſmall pariſhes of extraordinary fecundity, is not above 1 in 26, and in many pariſhes, it is conſiderably leſs than 1 in 40![b] *The ſame difference*, he remarks, takes place in the *mean life*. In the Lyonois it is a little above 25 years, while in the Pays de Vaud the loweſt mean life, and that only in a ſingle marſhy and unhealthy pariſh, is 29½ years, and in many places it is above 45 years.[c]

[a] Mémoires, &c. par la Société Econ. de Berne. Année 1766, premiere partie, p. 47, 48. [b] Id. p. 48. [c] Ibid.

" But

" But whence comes it," he ſays, " that the " country where children eſcape the beſt from " the dangers of infancy, and where the mean " life, in whatever way the calculation is made, " is higher than in any other, ſhould be pre- " ciſely that in which the fecundity is the " ſmalleſt? How comes it again, that of all our " pariſhes, the one which gives the mean life " the higheſt ſhould alſo be the one where " the tendency to increaſe is the ſmalleſt?

" To reſolve this queſtion, I will hazard a " conjecture, which, however, I give only as " ſuch. Is it not, that in order to maintain in " all places the proper equilibrium of popula- " lation, God has wiſely ordered things in ſuch " a manner, as that the force of life in each " country ſhould be in the inverſe ratio of its " fecundity.[a]

" In fact, experience verifies my conjecture. " Leyzin (a village in the Alps) with a popula- " lation of 400 perſons, produces but a little above " eight children a year. The Pays de Vaud, in " general, in proportion to the ſame number of " inhabitants produces 11, and the Lyonois " 16. But if it happen, that at the age of 20

[a] Mémoires, &c. par la Société Econ. de Berne. Année 1766, première partie, p. 48. et ſeq.

" years,

" years, the 8, the 11, and the 16, are reduced " to the ſame number, it will appear, that " the force of life gives in one place, what fe- " cundity does in another. And thus the moſt " healthy countries, having leſs fecundity, will " not overpeople themſelves, and the unhealthy " countries, by their extraordinary fecundity, " will be able to ſuſtain their population."

We may judge of the ſurpriſe of M. Muret, at finding from the regiſters, that the moſt healthy people were the leaſt prolific, by his betaking himſelf to a miracle, in order to account for it. But the *nodus* does not ſeem, in the preſent inſtance, to be worthy of ſuch an interference. The fact may be accounted for, without reſorting to ſo ſtrange a ſuppoſition, as that the fruitfulneſs of women ſhould vary inverſely as their health.

There is certainly a conſiderable difference in the healthineſs of different countries, ariſing partly from the ſoil and ſituation, and partly from the habits and employment of the people. When, from theſe or any other cauſes whatever, a great mortality takes place, a proportional number of births immediately enſues, owing both to the greater number of yearly marriages, from the increaſed demand for labour, and the greater

greater fecundity of each marriage, from being contracted at an earlier, and naturally a more prolific age.

On the contrary, when from oppoſite cauſes the healthineſs of any country or pariſh is extraordinarily great; if, from the habits of the people, no vent for an overflowing population be found in emigration, the abſolute neceſſity of the preventive check will be forced ſo ſtrongly on their attention, that they muſt adopt it or ſtarve; and conſequently the marriages being very late, the number annually contracted will not only be ſmall in proportion to the population, but each individual marriage will naturally be leſs prolific.

In the pariſh of Leyzin, noticed by M. Muret, all theſe circumſtances appear to have been combined in an unuſual degree. Its ſituation in the Alps, but yet not too high, gave it probably the moſt pure and ſalubrious air; and the employments of the people, being all paſtoral, were conſequently of the moſt healthy nature. From the calculations of M. Muret, the accuracy of which there is no reaſon to doubt, the probability of life in this pariſh appeared to be ſo extraordinarily high as 61 years.[a]

[a] Mémoires par la Société Econ. de Berne. Année 1766, table v, p. 64.

And the average number of the births being for a period of 30 years almoſt accurately equal to the number of deaths[a] clearly proved, that the habits of the people had not led them to emigrate, and that the reſources of the pariſh for the ſupport of population had remained nearly ſtationary. We are warranted therefore in concluding, that the paſtures were limited, and could not eaſily be increaſed either in quantity or quality. The number of cattle, which could be kept upon them, would of courſe be limited; and in the ſame manner, the number of perſons required for the care of theſe cattle.

Under ſuch circumſtances, how would it be poſſible for the young men, who had reached the age of puberty, to leave their fathers' houſes and marry, till an employment of herdſman, dairy-man, or ſomething of the kind, became vacant by death? And as, from the extreme healthineſs of the people, this muſt happen very ſlowly, it is evident, that the majority of them muſt wait during a great part of their youth in their bachelor ſtate, or run the moſt obvious riſk of ſtarving themſelves and their families. The caſe is ſtill ſtronger than in Norway, and

[a] Mémoires par la Société Econ. de Berne Année. 1766, table i, p. 15.

receives

receives a particular preciſion from the circumſtance of the births and deaths being ſo nearly equal.

If a father had unfortunately a larger family than uſual, the tendency of it would be rather to decreaſe than increaſe the number of marriages. He might perhaps with economy be juſt able to ſupport them all at home, though he could not probably find adequate employment for them on his ſmall property; but it would evidently be long before they could quit him, and the firſt marriage among the ſons would probably be after the death of the father; whereas, if he had had only two children, one of them might perhaps have married without leaving the parental roof, and the other on the death of the father. It may be ſaid perhaps in general, that the abſence or preſence of four grown-up unmarried people will make the difference of there being room, or not, for the eſtabliſhment of another marriage and a freſh family.

As the marriages in this pariſh would, with few exceptions, be very late, and yet from the extreme healthineſs of the ſituation be very ſlowly diſſolved by the death of either of the parties, it is evident, that a very large proportion

of the ſubſiſting marriages would be among perſons ſo far advanced in life, that moſt of the women would have ceaſed to bear children; and in conſequence the whole number of ſubſiſting marriages was found to be to the number of annual births in the very unuſual proportion of 12 to 1. The births were only about a 49th part of the population; and the number of perſons above ſixteen was to the number below that age nearly as 3 to 1.[a]

As a contraſt to this pariſh, and a proof how little the number of births can be depended upon for an eſtimate of population, M. Muret produces the pariſh of St. Cergue in the Jura, in which the ſubſiſting marriages were to the annual births only in the proportion of 4 to 1, the births were a 26th part of the population, and the number of perſons above and below ſixteen juſt equal.[b]

Judging of the population of theſe pariſhes from the proportion of their annual births, it would appear, he ſays, that Leyzin did not exceed St. Cergue by above one fifth at moſt; whereas, from actual enumeration, the popula-

[a] Mémoires, &c. par la Société Econ. de Berne. Année 1766, p. 11 and 12. [b] Ibid.

tion

tion of the former turned out to be 405, and of the latter only 171.[a]

I have choſen, he obſerves, the pariſhes where the contraſt is the moſt ſtriking; but though the difference be not ſo remarkable in the reſt, yet it will always be found true, that from one place to another, even at very ſmall diſtances, and in ſituations apparently ſimilar, the proportions will vary conſiderably.[b]

It is ſtrange, that after making theſe obſervations, and others of the ſame tendency, which I have not produced, he ſhould reſt the whole proof of the depopulation of the Pays de Vaud on the proportion of births. There is no good reaſon for ſuppoſing, that this proportion ſhould not be different at different periods, as well as in different ſituations. The extraordinary contraſt in the fecundity of the two pariſhes of Leyzin and St. Cergue depends upon cauſes within the power of time and circumſtances to alter. From the great proportion of infants which was found to grow up to maturity in St. Cergue, it appeared, that its natural healthineſs was not much inferior to that of Leyzin.[c] The proportion of its births to deaths was 7

[a] Mémoires, &c. par la Société Econ. de Berne. Année 1766, p. 11. [b] Id. p. 13. [c] Id. table xiii, p. 120.

to 4;[a] but as the whole number of its inhabitants did not exceed 171, it is evident, that this great exceſs of births could not have been regularly added to the population during the laſt two centuries. It muſt have ariſen, therefore, either from a ſudden increaſe of late years in the agriculture or trade of the pariſh, or from a habit of emigration. The latter ſuppoſition I conceive to be the true one, and it ſeems to be confirmed by the ſmall proportion of adults which has already been noticed. The pariſh is ſituated in the Jura, by the ſide of the high road from Paris to Geneva, a ſituation which would evidently tend to facilitate emigration; and in fact, it ſeems to have acted the part of a breeding pariſh for the towns and flat countries, and the annual drain of a certain portion of the adults made room for all the reſt to marry, and to rear a numerous offſpring.

A habit of emigration, in a particular pariſh, will not only depend on ſituation, but probably often on accident. I have little doubt, that three or four very ſucceſsful emigrations have frequently given a ſpirit of enterpriſe to a whole village; and three or four unſucceſsful ones a

[a] Mémoires, &c. par la Société Econ. de Berne. Année 1766, table i, p. 11.

contrary

contrary ſpirit. If a habit of emigration were introduced into the village of Leyzin, it is not to be doubted, that the proportion of births would be immediately changed; and at the end of twenty years, an examination of its regiſters might give reſults as different from thoſe at the time of M. Muret's calculations, as they were then from the contraſted pariſh of St. Cergue. It will hence appear, that other cauſes beſide a greater mortality will concur, to make an eſtimate of population, at different periods, from the proportion of births, liable to great uncertainty.

The facts which M. Muret has collected are all valuable, though his inferences cannot always be conſidered in the ſame light. He made ſome calculations at Vevey, of a nature really to aſcertain the queſtion reſpecting the fecundity of marriages, and to ſhow the incorrectneſs of the uſual mode of eſtimating it, though without this particular object in view at the time. He found that 375 mothers had yielded 2093 children, all born alive, from which it followed, that each mother had produced $5\frac{10}{11}$, or nearly ſix children.[a] Theſe however were all actually mo-

[a] Mémoires, &c. par la Société Econ. de Berne. Année 1766, p. 29, et ſeq.

thers, which every wife is not; but allowing for the uſual proportion of barren wives at Vevey, which he had found to be 20 out of 478, it will ſtill appear, that the married women one with another produced above $5\frac{1}{3}$ children.[a] And yet this was in a town, the inhabitants of which he ſeems to accuſe of not entering into the marriage ſtate at the period when nature called them, and, when married, of not having all the children which they might have.[b] The general proportion of the annual marriages to the annual births in the Pays de Vaud is as 1 to 3·9,[c] and of courſe, according to the common mode of calculation, the marriages would appear to yield 3·9 children each.

In a diviſion of the Pays de Vaud into eight different diſtricts, M. Muret found, that in ſeven towns the mean life was 36 years; and the probability of life, or the age to which half of the born live, 37. In 36 villages, the mean life

[a] On account of ſecond and third marriages, the fecundity of marriages muſt always be leſs than the fecundity of married women. The mothers alone are here conſidered without reference to the number of huſbands.

[b] Mémoires, &c. par la Société Econ. de Berne. Année 1766, p. 32. [c] Id. table i, p. 21.

was

was 37, and the probability of life 42. In nine pariſhes of the Alps the mean life was 40, and the probability of life 47. In ſeven pariſhes of the Jura, theſe two proportions were 38 and 42: in 12 corn pariſhes, 37 and 40; in 18 pariſhes among the great vineyards, 34 and 37: in 6 pariſhes of mixed vines and hills, $33\frac{9}{10}$ and 36: and in one marſhy, 29 and 24.[a]

From another table it appears, that the number of perſons dying under the age of puberty was leſs than $\frac{1}{5}$ in the extraordinary pariſh of Leyzin; and leſs than $\frac{1}{4}$ in many other pariſhes of the Alps and the Jura. For the whole of the Pays de Vaud it was about $\frac{1}{3}$.[b]

In ſome of the largeſt towns, ſuch as Lauſanne and Vevey, on account of the number of ſtrangers above the age of puberty ſettling in them, the proportion of adults to thoſe under 15 was nearly as great as in the pariſh of Leyzin, and not far from 3 to 1. In the pariſhes from which there were not many emigrations, this proportion was about 2 to 1. And in thoſe which furniſhed inhabitants for other countries, it approached more towards an equality.[c]

[a] Mémoires, &c. par la Société de Berne. Année 1766, table viii, p. 92, et ſeq. [b] Id. table xiii, p. 120.

[c] Id. table xii.

The

The whole population of the Pays de Vaud M. Muret eſtimated at 113 thouſand, of which 76 thouſand were adults. The proportion of adults therefore to thoſe under the age of puberty, for the whole country, was 2 to 1. Among theſe 76 thouſand adults, there were 19 thouſand ſubſiſting marriages, and conſequently 38 thouſand married perſons; and the ſame number of perſons unmarried, though of the latter number nine thouſand, according to M. Muret, would probably be widows or widowers.[a] With ſuch an average ſtore of unmarried perſons, notwithſtanding the acknowledged emigrations, there was little ground for the ſuppoſition, that theſe emigrations had eſſentially affected the number of annual marriages, and checked the progreſs of population.

The proportion of annual marriages to inhabitants in the Pays de Vaud, according to M. Muret's tables, was only 1 to 140,[b] which is even leſs than in Norway.

All theſe calculations of M. Muret imply the operation of the preventive check to population in a conſiderable degree, throughout the whole of the diſtrict which he conſidered; and

[a] Mémoires, &c. par la Société de Berne. Année 1766, première partie, p. 27. [b] Id. tab. i.

there

there is reaſon to believe, that the ſame habits prevail in other parts of Switzerland, though varying conſiderably from place to place, according as the ſituation or the employments of the people render them more or leſs healthy, or the reſources of the country make room or not for an increaſe.

In the town of Berne, from the year 1583 to 1654, the ſovereign council had admitted into the Bourgeoiſie 487 families, of which 379 became extinct in the ſpace of two centuries, and in 1783 only 108 of them remained. During the hundred years from 1684 to 1784, 207 Bernoiſe families became extinct. From 1624 to 1712, the Bourgeoiſie was given to 80 families. In 1623, the ſovereign council united the members of 112 different families, of which 58 only remain.[a]

The proportion of unmarried perſons in Berne, including widows and widowers, is conſiderably above the half of the adults, and the proportion of thoſe below ſixteen to thoſe above is nearly as 1 to 3.[b] Theſe are ſtrong proofs of the powerful operation of the preventive check.

[a] Statiſtique de la Suiſſe, Durand, tom iv, p. 405. 8vo. 4 vols. Lauſanne, 1796. [b] Beſchreibung von Bern, vol. ii. tab. i, p. 35. 2 vols. 8vo. Bern. 1796.

The

The peaſants in the canton of Berne have always had the reputation of being rich, and without doubt it is greatly to be attributed to this cauſe. A law has for ſome time prevailed, which makes it neceſſary for every peaſant to prove himſelf in poſſeſſion of the arms and accoutrements neceſſary for the militia, before he can obtain permiſſion to marry. This at once excludes the very pooreſt from marriage; and a very favourable turn may be given to the habits of many others, from a knowledge that they cannot accompliſh the object of their wiſhes, without a certain portion of induſtry and economy. A young man who, with this end in view, had engaged in ſervice, either at home or in a foreign country, when he had gained the neceſſary ſum, might feel his pride rather raiſed, and not be contented merely with what would obtain him permiſſion to marry, but go on till he could obtain ſomething like a proviſion for a family.

I was much diſappointed when in Switzerland, at not being able to procure any details reſpecting the ſmaller cantons, but the diſturbed ſtate of the country made it impoſſible. It is to be preſumed, however, that as they are almoſt entirely in paſture, they muſt reſemble in a great meaſure the alpine pariſhes of the Pays de Vaud

in

in the extraordinary health of the people, and the abſolute neceſſity of the preventive check; except where theſe circumſtances may have been altered by a more than uſual habit of emigration, or by the introduction of manufactures.

The limits to the population of a country ſtrictly paſtoral are ſtrikingly obvious. There are no grounds leſs ſuſceptible of improvement than mountainous paſtures. They muſt neceſſarily be left chiefly to nature; and when they have been adequately ſtocked with cattle, little more can be done. The great difficulty in theſe parts of Switzerland, as in Norway, is to procure a ſufficient quantity of fodder for the winter ſupport of the cattle, which have been fed on the mountains in the ſummer. For this purpoſe graſs is collected with the greateſt care. In places inacceſſible to cattle, the peaſant ſometimes makes hay with crampons on his feet; graſs is cut not three inches high in ſome places, three times a year; and in the vallies, the fields are ſeen ſhaven as cloſe as a bowling-green, and all the inequalities clipped as with a pair of ſciſſars. In Switzerland as in Norway, for the ſame reaſons, the art of mowing ſeems to be carried to its higheſt pitch of perfection. As, however, the improvement

ment of the lands in the vallies muſt depend principally upon the manure ariſing from the ſtock, it is evident, that the quantity of hay and the number of cattle will be mutually limited by each other; and as the population will of courſe be limited by the produce of the ſtock, it does not ſeem poſſible, to increaſe it beyond a certain point, and that at no great diſtance. Though the population, therefore, in the flat parts of Switzerland, has increaſed during the laſt century, there is reaſon to believe, that it has been ſtationary in the mountainous parts. According to M. Muret, it has decreaſed very conſiderably in the Alps of the Pays de Vaud, but his proofs of this fact have been noticed as extremely uncertain. It is not probable, that the Alps are leſs ſtocked with cattle than they were formerly; and if the inhabitants be really rather fewer in number, it is probably owing to the ſmaller proportion of children, and to the improvement which has taken place in the mode of living.

In ſome of the ſmaller cantons, manufactures have been introduced, which by furniſhing a greater quantity of employment, and at the ſame time a greater quantity of exports for the purchaſe of corn, have of courſe conſiderably increaſed

creaſed their population. But the Swiſs writers ſeem generally to agree, that the diſtricts where they have been eſtabliſhed have upon the whole ſuffered in point of health, morals, and happineſs.

It is the nature of paſturage, to produce food for a much greater number of people than it can employ. In countries ſtrictly paſtoral, therefore, many perſons will be idle, or at moſt be very inadequately occupied. This ſtate of things naturally diſpoſes to emigration, and is the principal reaſon that the Swiſs have been ſo much engaged in foreign ſervice. When a father had more than one ſon, thoſe who were not wanted on the farm would be powerfully tempted to enrol themſelves as ſoldiers, or to emigrate in ſome other way, as the only chance of enabling them to marry.

It is poſſible, though not probable, that a more than uſual ſpirit of emigration, operating upon a country, in which, as it has appeared, the preventive check prevailed to a very conſiderable degree, might have produced a temporary check to increaſe at the period, when there was ſuch a univerſal cry about depopulation. If this were ſo, it without doubt contributed to improve the condition of the lower claſſes of people. All the foreign travellers in

Switzer-

Switzerland, ſoon after this time, invariably take notice of the ſtate of the Swiſs peaſantry as ſuperior to that of other countries. In a late excurſion to Switzerland, I was rather diſappointed not to find it ſo ſuperior, as I had been taught to expect. The greateſt part of the unfavourable change might juſtly be attributed to the loſſes and ſufferings of the people, during the late troubles; but a part perhaps to the ill-directed efforts of the different governments to increaſe the population, and to the ultimate conſequences even of efforts well directed, and for a time calculated to advance the comforts and happineſs of the people.

I was very much ſtruck with an effect of this laſt kind, in an expedition to the *Lac de Joux* in the Jura. The party had ſcarcely arrived at a little inn at the end of the lake, when the miſtreſs of the houſe began to complain of the poverty and miſery of all the pariſhes in the neighbourhood. She ſaid, that the country produced little, and yet was full of inhabitants; that boys and girls were marrying, who ought ſtill to be at ſchool; and that, while this habit of early marriages continued, they ſhould always be wretched, and diſtreſſed for ſubſiſtence.

The peaſant, who afterwards conducted us to

to the ſource of the Orbe, entered more fully into the ſubject, and appeared to underſtand the principal of population almoſt as well as any man I ever met with. He ſaid, that the women were prolific, and the air of the mountains ſo pure and healthy, that very few children died, except from the conſequences of abſolute want; that the ſoil, being barren, was inadequate to yield employment and food for the numbers, that were yearly growing up to manhood; that the wages of labour were conſequently very low, and totally inſufficient for the decent ſupport of a family; but that the miſery and ſtarving condition of the greater part of the ſociety did not operate properly as a warning to others, who ſtill continued to marry, and to produce a numerous offspring, which they could not ſupport. This habit of early marriages might really, he ſaid, be called *le vice du pays*; and he was ſo ſtrongly impreſſed with the neceſſary and unavoidable wretchedneſs that muſt reſult from it, that he thought a law ought to be made reſtricting men from entering into the marriage ſtate before they were forty years of age, and then allowing it only with "*des vieilles filles*," who might bear them two or three children inſtead of ſix or eight.

I could not help being diverted with the earneſtneſs of his oratory on this ſubject, and particularly with his concluding propoſition. He muſt have ſeen and felt the miſery ariſing from a redundant population moſt forcibly, to have propoſed ſo violent a remedy. I found upon inquiry, that he had himſelf married very young.

The only point in which he failed, as to his philoſophical knowledge of the ſubject, was in confining his reaſonings too much to barren and mountainous countries, and not extending them into the plains. In fertile ſituations he thought, perhaps, that the plenty of corn and employment might remove the difficulty, and allow of early marriages. Not having lived much in the plains, it was natural for him to fall into this error; particularly as in ſuch ſituations the difficulty is not only more concealed from the extenſiveneſs of the ſubject; but is in reality leſs, from the greater mortality naturally occaſioned by low grounds, towns, and manufactories.

On inquiring into the principal cauſe of what he had named the *predominant vice* of his country, he explained it with great philoſophical preciſion. He ſaid, that a manufacture for the poliſhing of ſtones had been eſtabliſhed ſome years ago,

ago, which for a time had been in a very thriving ſtate, and had furniſhed high wages and employment to all the neighbourhood; that the facility of providing for a family, and of finding early employment for children, had encouraged to a degree early marriages; and that the ſame habit had continued, when from a change of faſhion, accident, and other cauſes, the manufacture was almoſt at an end. Very great emigrations, he ſaid, had of late years taken place; but the breeding ſyſtem went on ſo faſt, that they were not ſufficient to relieve the country of its ſuperabundant mouths, and the effect was ſuch as he had deſcribed to me, and as I had in part ſeen.

In other converſations which I had with the lower claſſes of people in different parts of Switzerland and Savoy, I found many, who, though not ſufficiently ſkilled in the principle of population, to ſee its effects on ſociety like my friend of the *Lac de Joux*, yet ſaw them clearly enough as affecting their own individual intereſts; and were perfectly aware of the evils, which they ſhould probably bring upon themſelves by marrying before they could have a tolerable proſpect of being able to maintain a family. From the general ideas which I found to prevail

on theſe ſubjects, I ſhould by no means ſay, that it would be a difficult taſk to make the common people comprehend the principle of population, and its effect in producing low wages and poverty.

Though there is no abſolute proviſion for the poor in Switzerland, yet each pariſh generally poſſeſſes ſome ſeigneural rights and property in land for the public uſe, and is expected to maintain its own poor. Theſe funds, however, being limited, will of courſe often be totally inſufficient, and occaſionally voluntary collections are made for this purpoſe. But the whole of the ſupply being comparatively ſcanty and uncertain, it has not the ſame bad effects as the pariſh rates of England. Of late years much of the common lands belonging to pariſhes has been parcelled out to individuals, which has of courſe tended to improve the ſoil, and increaſe the number of people; but from the manner in which it has been conducted it has operated perhaps too much as a ſyſtematic encouragement of marriage, and has contributed to increaſe the number of poor. In the neighbourhood of the richeſt *communes*, I often obſerved the greateſt number of beggars.

There is reaſon to believe, however, that the efforts

efforts of the Economical Society of Berne to promote agriculture were crowned with ſome ſucceſs; and that the increaſing reſources of the country have made room for an additional population, and furniſhed an adequate ſupport for the greateſt part, if not the whole, of that increaſe which has of late taken place.

In 1764 the population of the whole canton of Berne, including the Pays de Vaud, was eſtimated at 336,089. In 1791, it had increaſed to 414,420. From 1764 to 1777, its increaſe proceeded at the rate of 2000 each year; and, from 1778 to 1791, at the rate of 3109 each year.[a]

[a] Beſchreibung von Bern, vol. ii, p. 40.

CHAP. VI.

Of the Checks to Population in France.

As the parochial regiſters in France, before the revolution, were not kept with peculiar care, nor for any great length of time, and as the few which have been produced exhibit no very extraordinary reſults, I ſhould not have made this country the ſubject of a diſtinct chapter, but for a circumſtance attending the revolution, which has excited conſiderable ſurpriſe. This is, the undiminiſhed ſtate of the population in ſpite of the loſſes ſuſtained during ſo long and deſtructive a conteſt.

A great national work, founded on the reports of the Prefects in the different departments, is at preſent in ſome ſtate of forwardneſs at Paris, and when completed it may reaſonably be expected to form a very valuable acceſſion to the materials of ſtatiſtical ſcience in general. The returns of all the Prefects are not however yet complete ; but I was poſitively aſſured, by the perſon who has the principal ſuperintendence

intendence of them, that enough is already known to be certain, that the population of the old territory of France has rather increaſed than diminiſhed during the revolution.

Such an event, if true, very ſtrongly confirms the general principles of this work; and aſſuming it for the preſent as a fact, it may tend to throw ſome light on the ſubject, to trace a little in detail the manner, in which ſuch an event might happen.

In every country there is always a conſiderable body of unmarried perſons, formed by the gradual accumulation of the exceſs of the number ariſing annually to the age of puberty above the number of perſons annually married. The ſtop to the further accumulation of this body is when its number is ſuch, that the yearly mortality equals the yearly acceſſions that are made to it. In the Pays de Vaud, as appeared in the laſt chapter, this body, including widows and widowers, perſons who are not actually in the ſtate of marriage, equals the whole number of married perſons. But in a country like France, where both the mortality and the tendency to marriage are much greater than in Switzerland, this body does not bear ſo large a proportion to the population.

According to a calculation in an *Eſſai d'une Statiſtique Générale*, publiſhed at Paris in 1800, by M. Peuchet, the number of unmarried males in France between 18 and 50 is eſtimated at 1,451,063; and the number of males, whether married or not, between the ſame ages, at 5,000,000.[a] It does not appear at what period exactly this calculation was made; but as the author uſes the expreſſion *en tems ordinaire*, it is probable, that he refers to the period before the revolution. Let us ſuppoſe, then, that this number of 1,451,063 expreſſes the collective body of unmarried males of a military age at the commencement of the revolution.

The population of France, before the beginning of the war, was eſtimated by the Conſtituent Aſſembly, at 26,363,074;[b] and there is no reaſon to believe, that this calculation was too high. Necker, though he mentions the number 24,800,000, expreſſes his firm belief, that the yearly births at that time amounted to above a million, and conſequently, according to his multiplier of $25\frac{3}{4}$, that the whole popula-

[a] p. 32, 8vo. 78 pages.

[b] A. Young's Travels in France, vol. i, c. xvii, p. 466. 4to, 1792.

tion

tion was nearly 26 millions;[a] and this calculation was made ten years previous to the eſtimate of the Conſtituent Aſſembly.

Taking then the annual births at rather above a million, and eſtimating that rather above $\frac{2}{7}$ would die under 18, which appears to be the caſe from ſome calculations of M. Peuchet,[b] it will follow, that about 600,000 perſons will annually arrive at the age of 18.

The annual marriages, according to Necker, are 213,774;[c] but as this number is an average of ten years, taken while the population was increaſing, it is probably too low. If we take 220,000, then 440,000 perſons will be ſuppoſed to marry out of the 600,000 riſing to a marriageable age; and, conſequently, the exceſs of thoſe riſing to the age of 18 above the number wanted to complete the uſual proportion of annual marriages, will be 160,000, or 80,000 males. It is evident, therefore, that the accumulated body of 1,451,063 unmarried males, of a military age, and the annual ſupply of 80,000 youths of 18, might be taken for the ſervice of the ſtate, without affecting in any degree the number of

[a] De l' Adminſtration des Finances, tom. i, c. ix, p. 256. 12mo, 1785.

[b] Eſſai, p. 31.

[c] De l' Adminiſtration des Finances, tom. i, c. ix, p. 255.

annual

annual marriages. But we cannot ſuppoſe, that the 1,451,063 ſhould be taken all at once, and many ſoldiers are married, and in a ſituation not to be entirely uſeleſs to the population. Let us ſuppoſe 600,000 of the corps of unmarried males to be embodied at once; and this number to be kept up by the annual ſupply of 150,000 perſons, taken partly from the 80,000, riſing annually to the age of 18, and not wanted to complete the number of annual marriages, and partly from the 851,063 remaining of the body of unmarried males, which exiſted at the beginning of the war.

It is evident, that from theſe two ſources 150,000 might be ſupplied each year, for ten years, and yet allow of an increaſe in the uſual number of annual marriages of above 10,000.

It is true, that in the courſe of the ten years many of the original body of unmarried males will have paſſed the military age; but this will be balanced, and indeed much more than balanced, by their utility in the married life. From the beginning, it ſhould be taken into conſideration, that though a man of fifty be generally conſidered as paſt the military age, yet if he marry a fruitful ſubject, he may by no means be uſeleſs to the population; and in fact the

the ſupply of 150,000 recruits each year would be taken principally from the 300,000 males riſing annually to 18, and the annual marriages would be ſupplied in great meaſure from the remaining part of the original body of unmarried perſons. Widowers and bachelors of forty and fifty, who in the common ſtate of things might have found it difficult to obtain an agreeable partner, would probably ſee theſe difficulties removed in ſuch a ſcarcity of huſbands; and the abſence of 600,000 perſons would of courſe make room for a very conſiderable addition to the number of annual marriages. This addition in all probability took place. Many, among the remaining part of the original body of bachelors, who might otherwiſe have continued ſingle, would marry under this change of circumſtances; and it is known, that a very conſiderable portion of youths under 18, in order to avoid the military conſcriptions, entered prematurely into the married ſtate. This was ſo much the caſe, and contributed ſo much to diminiſh the number of unmarried perſons, that in the beginning of the year 1798 it was found neceſſary to repeal the law, which had exempted married perſons from the conſcriptions; and thoſe who married ſubſequently to this new regulation

gulation were taken indiſcriminately with the unmarried. And though after this the levies fell in part upon thoſe who were actually engaged in the peopling of the country; yet the number of marriages untouched by theſe levies might ſtill remain greater than the uſual number of marriages before the revolution; and the marriages which were broken by the removal of the huſband to the armies would not probably have been entirely barren.

Sir Francis d'Ivernois, who had certainly a tendency to exaggerate, and probably has exaggerated conſiderably, the loſſes of the French nation, eſtimates the total loſs of the troops of France, both by land and ſea, up to the year 1799, at a million and a half.[a] The round

[a] Tableau des Pertes, &c. c. ii, p. 7. Monſ. Garnier, in the notes to his edition of Adam Smith, calculates that only about a ſixtieth part of the French population was deſtroyed in the armies. He ſuppoſes only 500,000 embodied at once, and that this number was ſupplied by 400,000 more in the courſe of the war; and allowing for the number which would die naturally, that the additional mortality occaſioned by the war was only about 45,000 each year. Tom. v, note xxx, p. 284. If the actual loſs were no more than theſe ſtatements make it, a ſmall increaſe of births would have eaſily repaired it; but I ſhould think, that theſe eſtimates are probably as much below the truth, as Sir Francis d'Ivernois's are above.

numbers

numbers which I have allowed, for the ſake of illuſtrating the ſubject, exceed Sir Francis d'Ivernois's eſtimate by ſix hundred thouſand. He calculates however a loſs of a million of perſons more, from the other cauſes of deſtruction attendant on the revolution; but as this loſs fell indiſcriminately on all ages and both ſexes, it would not affect the population in the ſame degree, and will be much more than covered by the 600,000 men in the full vigour of life, which remain above Sir Francis's calculation. It ſhould be obſerved, alſo, that in the latter part of the revolutionary war the military conſcriptions were probably enforced with ſtill more ſeverity in the newly-acquired territories than in the old ſtate; and as the population of theſe new acquiſitions is eſtimated at 5 or 6 millions, it would bear a conſiderable proportion of the million and a half ſuppoſed to be deſtroyed in the armies. And although the law which facilitated divorces to ſo great a degree be radically bad, both in a moral and political view, yet, under the circumſtance of a great ſcarcity of men, it would operate a little like the cuſtom of polygamy, and increaſe the number of children in proportion to the number of huſbands. In addition to this, the women without

without huſbands do not appear all to have been barren, as the proportion of illegitimate births is now raiſed to $\frac{1}{11}$ of the whole number of births, from $\frac{1}{17}$,[a] which it was before the revolution: and though this be a melancholy proof of the depravation of morals, yet it would certainly contribute to increaſe the number of births; and as the female peaſants in France were enabled to earn more than uſual during the revolution, on account of the ſcarcity of hands, it is probable, that a conſiderable portion of theſe children would ſurvive.

Under all theſe circumſtances, it cannot appear impoſſible, and ſcarcely even improbable, that the population of France ſhould remain undiminiſhed, in ſpite of all the cauſes of deſtruction, which have operated upon it during the courſe of the revolution, provided that the agriculture of the country has been ſuch as to continue the means of ſubſiſtence unimpaired. And it ſeems now to be generally acknowledged, that however ſeverely the manufactures of France may have ſuffered, her agriculture has increaſed rather than diminiſhed. At no period of the war can we ſuppoſe, that the number of embodied troops exceeded the number of men

[a] Eſſai de Peuchet, p. 28.

employed

employed before the revolution in manufactures. Thoſe who were thrown out of work by the deſtruction of theſe manufactures, and who did not go to the armies, would of courſe betake themſelves to the labours of agriculture; and it was always the cuſtom in France for the women to work much in the fields, which cuſtom was probably increaſed during the revolution. At the ſame time the abſence of a large portion of the beſt and moſt vigorous hands would raiſe the price of labour; and as, from the new land brought into cultivation, and the abſence of a conſiderable part of the greateſt conſumers[a] in foreign countries, the price of proviſions would not riſe in proportion, this advance in the price of labour would not only operate as a powerful encouragement to marriage, but would enable the peaſants to live better, and to rear a greater number of their children.

At all times the number of ſmall farmers and proprietors in France was great; and though ſuch a ſtate of things is by no means favour-

[a] Suppoſing the increaſed number of children at any period to equal the number of men abſent in the armies, yet theſe children, being all very young, could not be ſuppoſed to conſume a quantity equal to that which would be conſumed by the ſame number of grown-up perſons.

able

able to the clear ſurplus produce, or diſpoſable wealth of a nation; yet ſometimes it is not unfavourable to the abſolute produce, and it has always a moſt powerful tendency to encourage population. From the ſale and diviſion of many of the large domains of the nobles and clergy, the number of landed proprietors has conſiderably increaſed during the revolution; and as a part of theſe domains conſiſted of parks and chaces, new territory has been given to the plough. It is true, that the land tax has been not only too heavy, but injudiciouſly impoſed. It is probable, however, that this diſadvantage has been nearly counterbalanced by the removal of the former oppreſſions, under which the cultivator laboured; and that the ſale and diviſion of the great domains may be conſidered as a clear advantage on the ſide of agriculture, or at any rate of the groſs produce, which is the principal point with regard to mere population.

Theſe conſiderations make it appear probable, that the means of ſubſiſtence have at leaſt remained unimpaired, if they have not increaſed during the revolution; and a view of the cultivation of France in its preſent ſtate certainly rather tends to confirm this ſuppoſition.

We

We ſhall not therefore be inclined to agree with Sir Francis d'Ivernois in his conjecture, that the annual births in France have diminiſhed by one ſeventh during the revolution.[a] On the contrary, it is much more probable, that they have increaſed by this number. The average proportion of births to the population in all France, before the revolution, was according to Necker as 1 to $25\frac{3}{4}$.[b] It has appeared in the reports of ſome of the Prefects which have been returned, that the proportion in many country places was raiſed to 1 to 21, 22, $22\frac{1}{2}$, and 23;[c] and though theſe proportions might, in ſome degree, be cauſed by the abſence of a part of the population in the armies, yet I have little doubt, that they are principally to be attributed to the birth of a greater number of children than uſual. If, when the reports of all the Prefects are put together, it ſhould appear, that the number of births has not increaſed in proportion to the population, and yet that the population is undiminiſhed; it will follow, either that Necker's multiplier for the births was too ſmall; which is extremely probable, as from this cauſe

[a] Tableau des Pertes, &c. c. ii, p. 14.
[b] De l'Adminiſtration des Finances, tom. i, c. ix, p. 254.
[c] Eſſai de Peuchet, p. 28.

he appears to have calculated the population too low: or that the mortality among thoſe not expoſed to violent deaths has been leſs than uſual; which from the high price of labour, and the deſertion of the towns for the country, is not unlikely.

According to Necker and Moheau, the mortality in France, before the revolution, was 1 in 30 or $30\frac{1}{8}$.[a] Conſidering that the proportion of the population which lives in the country is to that in the towns as $3\frac{1}{2}$ to 1,[b] this mortality is extraordinarily great, cauſed probably by the miſery ariſing from an exceſs of population; and from the remarks of Arthur Young on the ſtate of the peaſantry in France,[c] which are completely ſanctioned by Necker,[d] this appears to have been really the caſe. If we ſuppoſe, that, from the removal of a part of this redundant population, the mortality has decreaſed from 1 in 30 to 1 in 35, this favourable change would go a con-

[a] De l'Adminiſtration des Finances, tom. i, c. ix, p. 255. Eſſai de Peuchet, p. 29.

[b] Young's Travels in France, vol. i, c. xvii, p. 466.

[c] See generally, c. xvii, vol. i, and the juſt obſervations on theſe ſubjects, interſperſed in many other parts of his very valuable tour.

[d] De l'Adminiſtration des Finances, tom i, c. ix, p. 262, et ſeq.

ſiderable

ſiderable way in repairing the breaches made by war on the frontiers.

The probability is, that both the cauſes mentioned have operated in part. The births have increaſed, and the deaths of thoſe remaining in the country have diminiſhed; ſo that putting the two circumſtances together, it will probably appear, when the reſults of all the reports of the Prefects are known, that, including thoſe who have fallen in the armies and by violent means, the deaths have not exceeded the births in the courſe of the revolution.

The returns of the Prefects are to be given for the year 9 of the republic, and to be compared with the year 1789; but if the proportion of births to the population be given merely for the individual year 9, it will not ſhow with preciſion the average proportion of births to the population during the courſe of the revolution. In the confuſion occaſioned by this event, it is not probable, that any very exact regiſters ſhould have been kept; but from theory I ſhould be inclined to expect, that ſoon after the beginning of the war, and at other periods during the courſe of it, the proportion of births to the whole population would be greater than in 1800

and 1801.[a] If it ſhould appear by the returns, that the number of annual marriages has not increaſed

[a] In the *Statiſtique Générale et Particulière de la France, e de ſes Colonies*, lately publiſhed, the returns of the Prefects for the year IX are given, and ſeem to juſtify this conjecture. The births are 955,430, the deaths 821,871, and the marriages 202,177. Theſe numbers hardly equal Necker's eſtimates; and yet all the calculations in this work, both with reſpect to the whole population and its proportion to a ſquare league, make the old territory of France more populous now than at the beginning of the revolution. The eſtimate of the population, at the period of the Conſtituent Aſſembly, has already been mentioned, and at this time the number of perſons to a ſquare league was reckoned 996. In the year VI of the Republic, the reſult of the Bureau de Cadaſtre gave a population of 26,048,254, and the number to a ſquare league 1,020. In the year VII Dépère calculated the whole population of France at 33,501,094, of which 28,810,694 belonged to ancient France; the number to a ſquare league 1,101. In the years IX and X, the addition of Piedmont and the iſle of Elba raiſed the whole population to 34,376,313, and nearly the ſame number as in the year VII was ſuppoſed to belong to ancient France; the number to a ſquare league 1,036.

In the face of theſe calculations, the author takes a lower multiplier than Necker for the births, obſerving, that, though Necker's proportions remained true in the towns, yet in the country the proportion of births had increaſed to $\frac{1}{21}$, $\frac{1}{22}$, $\frac{1}{23}$ $\frac{1}{24}$, $\frac{1}{27}$, which he attributes to the premature marriages to avoid the military levies; and on the whole concludes with mentioning

increaſed during the revolution, the circumſtance will be obviouſly accounted for by the extraordinary

mentioning 25 as the proper multiplier. And yet if we make uſe of this multiplier, we ſhall get a population under 25 millions, inſtead of 28 millions. It is true indeed, that no juſt inferences can be drawn from the births of a ſingle year, but as theſe are the only births referred to, the contradiction is obvious. Perhaps the future returns may ſolve the difficulty, and the births in the following years be greater; but I am inclined to think, as I have mentioned in the text, that the greateſt increaſe in the proportion of births was before the year IX, and probably during the firſt ſix or ſeven years of the republic, while married perſons were exempt from the military conſcriptions. If the ſtate of the agricultural part of the nation has been improved by the revolution, I am ſtrongly inclined to believe, that the proportions both of births and deaths will be found to diminiſh. In ſo fine a climate as France, nothing but the very great miſery of the lower claſſes could occaſion a mortality of $\frac{1}{30}$, and a proportion of births as $\frac{1}{25}\frac{1}{24}$, according to Necker's calculations. And conſequently upon this ſuppoſition, the births for the year IX may not be incorrect, and in future the births and deaths may not bear ſo large a proportion to the population. The contraſt between France and England in this reſpect is quite wonderful.

The part of this work relating to population is not drawn up with much knowledge of the ſubject. One remark is very curious. It is obſerved, that the proportion of marriages to the population is as 1 to 110, and of births as 1 to 25, from which it is inferred, that one fourth of the born live to marry. If this inference were juſt, France would ſoon be depopulated.

In calculating the value of lives, the author makes uſe of

extraordinary increaſe in the illegitimate births, mentioned before in this chapter, which amount at preſent to one eleventh of all the births, inſtead of one forty-ſeventh, according to the calculation of Necker before the revolution.[a]

Sir Francis d'Ivernois obſerves, that "thoſe "have yet to learn the firſt principles of political "arithmetic, who imagine, that it is in the

Buffon's tables, which are entirely incorrect, being founded principally on regiſters taken from the villages round Paris. They make the probability of life at birth only a little above eight years, which, taking the towns and the country together, is very ſhort of the juſt average.

Scarcely any thing worth noticing has been added in this work to the details given in the eſſay of Peuchet, which I have already frequently referred to. On the whole I have not ſeen ſufficient grounds, to make me alter any of my conjectures in this chapter, though probably they are not all well-founded. Indeed, in adopting Sir F. d'Ivernois' calculations reſpecting the actual loſs of men during the revolution, I never thought myſelf borne out by facts; but the reader will be aware, that I adopted them rather for the ſake of illuſtration than from ſuppoſing them ſtrictly true.

[a] Eſſai de Peuchet, p. 28. It is highly probable, that this increaſe of illegitimate births occaſioned a more than uſual number of children to be expoſed in thoſe dreadful receptacles, *les Hopitaux des Enfans trouvés*, as noticed by Sir Francis d'Ivernois; but probably this cruel cuſtom was confined to particular diſtricts, and the number expoſed, upon the whole, might bear no great proportion to the ſum of all the births.

"field

" field of battle and the hoſpitals, that an ac-
" count can be taken of the lives, which a revo-
" lution or a war has coſt. The number of
" men it has killed is of much leſs importance,
" than the number of children which it has
" prevented, and will ſtill prevent, from coming
" into the world. This is the deepeſt wound,
" which the population of France has received."
—" Suppoſing," he ſays, " that, of the whole
" number of men deſtroyed, only two millions
" had been united to as many females; accord-
" ing to the calculation of Buffon, theſe two
" millions of couples ought to bring into the
" world twelve millions of children, in order to
" ſupply, at the age of thirty-nine, a number
" equal to that of their parents. This is a
" point of view, in which the conſequences of
" ſuch a deſtruction of men becomes almoſt
" incalculable; becauſe they have much more
" effect with regard to the twelve millions of
" children, which they prevent from coming
" into exiſtence, than with regard to the actual
" loſs of the two millions and a half of men,
" for whom France mourns. It is not till a
" future period, that ſhe will be able to eſtimate
" this dreadful breach."[a]

[a] Tableau des Pertes, &c. c. ii, p. 13, 14.

And yet, if the circumſtances on which the foregoing reaſonings are founded ſhould turn out to be true, it will appear, that France has not loſt a ſingle birth by the revolution. She has the moſt juſt reaſon to mourn the two millions and a half of individuals, which ſhe may have loſt, but not their poſterity: becauſe, if theſe individuals had remained in the country, a proportionate number of children born of other parents, which are now living in France, would not have come into exiſtence. If, in the beſt governed country in Europe, we were to mourn the poſterity which is prevented from coming into being, we ſhould always wear the habit of grief.

It is evident, that the conſtant tendency of the births, in every country, to ſupply the vacancies made by death, cannot, in a moral point of view, afford the ſlighteſt ſhadow of excuſe for the wanton ſacrifice of men. The poſitive evil, that is committed in this caſe, the pain, miſery, and wide-ſpreading deſolation and ſorrow, that are occaſioned to the exiſting inhabitants, can by no means be counterbalanced by the conſideration, that the numerical breach in the population will be rapidly repaired. We can have no other right, moral or political, except

that

that of the moſt urgent neceſſity, to exchange the lives of beings in the full vigour of their enjoyments, for an equal number of helpleſs infants.

It ſhould alſo be remarked, that, though the numerical population of France may not have ſuffered by the revolution, yet if her loſſes have been in any degree equal to the conjectures on the ſubject, her military ſtrength cannot be unimpaired. Her population at preſent muſt conſiſt of a much greater proportion than uſual of women and children; and the body of unmarried perſons, of a military age, muſt be diminiſhed in a very ſtriking manner. This indeed is known to be the caſe, from the returns of the Prefects which have already been received.

It has appeared, that the point at which the drains of men will begin eſſentially to affect the population of a country is, when the original body of unmarried perſons is exhauſted, and the annual demands are greater than the exceſs of the number of males, riſing annually to the age of puberty, above the number wanted to complete the uſual proportion of annual marriages. France was probably at ſome diſtance from this point at the concluſion of the war; but in the preſent

preſent ſtate of her population, with an increaſed proportion of women and children, and a great diminution of males of a military age, ſhe could not make the ſame gigantic exertions, which were made at one period, without trenching on the ſources of her population.

At all times the number of males of a military age in France was ſmall in proportion to the population, on account of the tendency to marriage,[a] and the great number of children. Necker takes particular notice of this circumſtance. He obſerves, that the effect of the very great miſery of the peaſantry is to produce a dreadful mortality of infants under three or four years of age; and the conſequence is, that the number of young children will always be in too great a proportion to the number of grown-up people. A million of individuals, he juſtly obſerves, will in this caſe neither preſent the ſame military force, nor the ſame capacity of labour, as an equal number of individuals in a country where the people are leſs miſerable.[b]

Switzerland, before the revolution, could have brought into the field, or have employed in

[a] The proportion of marriages to the population in France, according to Necker, is 1 to 113, tom. i, c. ix, p. 255.

[b] De l'Adminiſtration des Finances, tom. i, c. ix, p. 263.

labour

labour appropriate to grown-up perſons, a much greater proportion of her population, than France at the ſame period.

It will be but of little conſequence, if any of the facts or calculations, which have been aſſumed in the courſe of this chapter, ſhould turn out to be falſe. The reader will ſee, that the reaſonings are of a general nature, and may be true, though the facts taken to illuſtrate them may prove to be inapplicable.[a]

[a] Since I wrote this chapter, I have had an opportunity of ſeeing the *Analyſe des Procès Verbaux des Conſeils Généraux de Département*, which gives a very particular and highly curious account of the internal ſtate of France for the year 8. With reſpect to the population, out of 69 departments, the reports from which are given, in 16 the population is ſuppoſed to be increaſed; in 42 diminiſhed; in 9 ſtationary; and in 2 the active population is ſaid to be diminiſhed, but the numerical to remain the ſame. It appears, however, that moſt of theſe reports are not founded on actual enumerations; and without ſuch poſitive data, the prevailing opinions on the ſubject of population, together with the neceſſary and univerſally acknowledged fact of a very conſiderable diminution in the males of a military age, would naturally diſpoſe people to think, that the numbers upon the whole muſt be diminiſhed. Judging merely from appearances, the ſubſtitution of a hundred children for a hundred grown-up perſons would certainly not produce the ſame impreſſion with regard to population. I ſhould not be ſurpriſed, therefore, if, when the enumerations for the year 9 are completed, it ſhould appear, that the

the population upon the whole has not diminiſhed. In ſome of the reports *l'aiſance générale répandue ſur le peuple*, and *la diviſion des grands propriétés*, are mentioned as the cauſes of increaſe; and almoſt univerſally, *les mariages prématurés*, and *les mariages multipliés par la crainte des loix militaires*, are particularly noticed.

With reſpect to the ſtate of agriculture, out of 78 reports, 6 are of opinion that it is improved; 10, that it is deteriorated; 70 demand that it ſhould be encouraged in general; 32 complain *de la multiplicité des défrichements*; and 12 demand *des encouragements pour les défrichements*. One of the reports mentions, *la quantité prodigieuſe de terres vagues miſe en culture depuis quelque tems, et les travaux multipliées, au de la de ce que peuvent exécuter les bras employes en agriculture*; and others ſpeak of *les défrichements multipliées qui ont eu lieu depuis pluſieurs années*, which appeared to be ſucceſsful at firſt; but it was ſoon perceived, that it would be more profitable to cultivate leſs, and cultivate well. Many of the reports notice the cheapneſs of corn, and the want of ſufficient vent for this commodity; and in the diſcuſſion of the queſtion reſpecting the diviſion of the *biens communaux*, it is obſerved, that, "le partage, en opérant le "défrichement de ces biens, a ſans doute produit une aug- "mentation réelle de denrées, mas d'un autre côté, les "vaines pâtures n'exiſtent plus, et les beſtiaux ſont peutêtre "diminués." On the whole therefore I ſhould be inclined to infer, that, though the agriculture of the country does not appear to have been conducted judiciouſly, ſo as to obtain a large *ſurplus* produce, yet the *abſolute* produce had by no means been diminiſhed during the revolution; and that the attempt to bring ſo much new land under cultivation had contributed to make the ſcarcity of labourers ſtill more ſenſible. And if it be allowed, that the food of the country did not decreaſe during the revolution, the high price of labour, which

which is very generally noticed, muſt have operated as a moſt powerful encouragement to population, among the labouring part of the ſociety.

The land tax, or *contribution foncière*, is univerſally complained of; indeed it appears to be extremely heavy, and to fall very unequally. It was intended to be only a fifth of the net produce; but, from the unimproved ſtate of agriculture in general, the number of ſmall proprietors, and particularly the attempt to cultivate too much ſurface in proportion to the capital employed, it often amounts to a fourth, a third, or even a half. When property is ſo much divided, that the rent and profit of a farm muſt be combined, in order to ſupport a family upon it, a land tax muſt neceſſarily greatly impede cultivation; though it has little or no effect of this kind when farms are large, and let out to tenants, as is moſt frequently the caſe in England. Among the impediments to agriculture mentioned in the reports, the too great diviſion of lands from the new laws of ſucceſſion is noticed. The partition of ſome of the great domains would probably contribute to the improvement of agriculture; but ſubdiviſions of the nature here alluded to would certainly have a contrary effect, and would tend moſt particularly to diminiſh ſurplus produce, and make a land tax both oppreſſive and unproductive. If all the land in England were divided into farms of 20l. a year, we ſhould probably be more populous than we are at preſent; but as a nation we ſhould be extremely poor. We ſhould be almoſt without diſpoſable revenue, and ſhould be under a total inability of maintaining the ſame number of manufactures, or collecting the ſame taxes as at preſent. All the departments demand a diminution of the *contribution foncière* as abſolutely neceſſary to the proſperity of agriculture.

Of the ſtate of the hoſpitals and charitable eſtabliſhments, of the prevalence of beggary, and the mortality among the expoſed

poſed children, a moſt deplorable picture is drawn in almoſt all the reports: from which we ſhould at firſt be diſpoſed to infer a greater degree of poverty and miſery among all the lower claſſes of people in general. It appears, however, that the hoſpitals and charitable eſtabliſhments loſt almoſt the whole of their revenues during the revolution; and this ſudden ſubtraction of ſupport from a great number of people who had no other reliance, together with the known failure of manufactures in the towns, and the very great increaſe of illegitimate children, might produce all the diſtreſſing appearances deſcribed in the reports, without impeaching the great fact of the meliorated condition of agricultural labourers in general, neceſſarily ariſing from the acknowledged high price of labour, and comparative cheapneſs of corn; and it is from this part of the ſociety that the effective population of a country is principally ſupplied. If the poor's rates of England were ſuddenly aboliſhed, there would undoubtedly be the moſt complicated diſtreſs among thoſe who were before ſupported by them; but I ſhould not expect, that either the condition of the labouring part of the ſociety in general, or the population of the country, would ſuffer from it. As the proportion of illegitimate children in France has riſen ſo extraordinarily, as from $\frac{1}{47}$ of all the births to $\frac{1}{11}$, it is evident, that more might be abandoned in hoſpitals, and more out of theſe die than uſual, and yet a more than uſual number be reared at home, and eſcape the mortality of theſe dreadful receptacles. It appears, that from the low ſtate of the funds in the hoſpitals the proper nurſes could not be paid, and numbers of children died from abſolute famine. Some of the hoſpitals at laſt very properly refuſed to receive any more.

The reports, upon the whole, do not preſent a favourable picture of the internal ſtate of France; but ſomething is undoubtedly to be attributed to the nature of theſe reports, which,

which, conſiſting as they do of obſervations explaining the ſtate of the different departments, and of particular demands, with a view to obtain aſſiſtance or relief from government, it is to be expected, that they ſhould lean rather to the unfavourable ſide. When the queſtion is reſpecting the impoſition of new taxes, or the relief from old ones, people will generally complain of their poverty. On the ſubject of taxes, indeed, it would appear, as if the French government muſt be a little puzzled. For though it very properly recommended to the *conſeils généraux* not to indulge in vague complaints, but to mention ſpecific grievances, and propoſe ſpecific remedies, and particularly not to adviſe the abolition of one tax without ſuggeſting another; yet all the taxes appear to me to be reprobated, and moſt frequently in general terms, without the propoſal of any ſubſtitute. *La contribution foncière*, *la taxe mobiliaire*, *les barrières*, *les droits de douane*, all excite bitter complaints; and the only new ſubſtitute that ſtruck me was a tax upon game, which, being at preſent almoſt extinct in France, cannot be expected to yield a revenue ſufficient to balance all the reſt. The work, upon the whole, is extremely curious; and as ſhowing the wiſh of the government to know the ſtate of each department, and to liſten to every obſervation and propoſal for its improvement, is highly creditable to the ruling power. It was publiſhed for a ſhort time, but the circulation of it was ſoon ſtopped and confined to the miniſters, *les conſeils généraux*, &c. Indeed the documents are evidently more of a private than of a public nature, and certainly have not the air of being intended for general circulation.

For the ſtate of population in Spain, I refer the reader to the valuable and entertaining travels of Mr. Townſend in that country, in which he will often find the principle of population

population very happily illuſtrated." I ſhould have made it the ſubject of a diſtinct chapter, but was fearful of extending this part of the work too much, and of falling almoſt unavoidably into too many repetitions, from the neceſſity of drawing the ſame kind of inference from ſo many different countries. I could expect, beſides, to add very little to what has been ſo well done by Mr. Townſend.

CHAP.

CHAP. VII.

Of the Checks to Population in England.

THE moſt curſory view of ſociety in this country muſt convince us, that throughout all ranks the preventive check to population prevails in a conſiderable degree. Thoſe among the higher claſſes, who live principally in towns, often want the inclination to marry, from the facility with which they can indulge themſelves in an illicit intercourſe with the ſex. And others are deterred from marrying by the idea of the expenſes that they muſt retrench, and the pleaſures of which they muſt deprive themſelves, on the ſuppoſition of having a family. When the fortune is large theſe conſiderations are certainly trivial; but a preventive foreſight of this kind has objects of much greater weight for its contemplation as we go lower.

A man of liberal education, with an income only juſt ſufficient to enable him to aſſociate in the rank of gentlemen, muſt feel abſolutely certain, that, if he marry and have a family, he ſhall

be obliged to give up all his former connections. The woman, that a man of education would naturally make the object of his choice, is one brought up in the ſame habits and ſentiments with himſelf, and uſed to the familiar intercourſe of a ſociety totally different from that, to which ſhe muſt be reduced by marriage. Can a man eaſily conſent to place the object of his affection in a ſituation ſo diſcordant, probably, to her habits and inclinations? Two or three ſteps of deſcent in ſociety, particularly at this round of the ladder, where education ends and ignorance begins, will not be conſidered by the generality of people as a chimerical but a real evil. If ſociety be deſirable, it ſurely muſt be free, equal, and reciprocal ſociety, where benefits are conferred as well as received, and not ſuch as the dependent finds with his patron, or the poor with the rich.

Theſe conſiderations certainly prevent many in this rank of life from following the bent of their inclinations in an early attachment. Others, influenced either by a ſtronger paſſion or a weaker judgment, diſregard theſe conſiderations; and it would be hard indeed, if the gratification of ſo delightful a paſſion as virtuous love did not ſometimes more than counterba-

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lance all its attendant evils. But I fear it muſt be acknowledged, that the more general conſequences of ſuch marriages are rather calculated to juſtify than to diſappoint the forebodings of the prudent.

The ſons of tradeſmen and farmers are exhorted not to marry, and generally find it neceſſary to comply with this advice, till they are ſettled in ſome buſineſs or farm, which may enable them to ſupport a family. Theſe events may not perhaps occur, till they are far advanced in life. The ſcarcity of farms is a very general complaint; and the competition in every kind of buſineſs is ſo great, that it is not poſſible, that all ſhould be ſucceſsful. Among the clerks in counting houſes, and the competitors for all kinds of mercantile and profeſſional employment, it is probable, that the preventive check to population prevails more than in any other department of ſociety.

The labourer who earns eighteen pence or two ſhillings a day, and lives at his eaſe as a ſingle man, will heſitate a little before he divides that pittance among four or five, which ſeems to be not more than ſufficient for one. Harder fare and harder labour he would perhaps be willing to ſubmit to for the ſake of living with

the woman that he loves; but he muſt feel conſcious, that ſhould he have a large family, and any ill fortune whatever, no degree of frugality, no poſſible exertion of his manual ſtrength, would preſerve him from the heartrending ſenſation of ſeeing his children ſtarve, or of being obliged to the pariſh for their ſupport. The love of independence is a ſentiment, that ſurely none would wiſh to ſee eradicated; though the poor laws of England, it muſt be confeſſed, are a ſyſtem of all others the moſt calculated gradually to weaken this ſentiment, and in the end will probably deſtroy it completely.

The ſervants who live in the families of the rich have reſtraints yet ſtronger to break through in venturing upon marriage. They poſſeſs the neceſſaries, and even the comforts of life, almoſt in as great plenty as their maſters. Their work is eaſy and their food luxurious, compared with the work and food of the claſs of labourers; and their ſenſe of dependence is weakened by the conſcious power of changing their maſters if they feel themſelves offended. Thus comfortably ſituated at preſent, what are their proſpects if they marry? Without knowledge or capital, either for buſineſs or farming, and unuſed and therefore unable to earn a ſubſiſtence by daily labour, their only refuge ſeems

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to be a miſerable alehouſe, which certainly offers no very enchanting proſpect of a happy evening to their lives. The greater number of them, therefore, deterred by this uninviting view of their future ſituation, content themſelves with remaining ſingle where they are.

If this ſketch of the ſtate of ſociety in England be near the truth, it will be allowed, that the preventive check to population operates with conſiderable force throughout all the claſſes of the community. And this obſervation is further confirmed by the abſtracts from the regiſters returned in conſequence of the late Population Act. The reſults of theſe abſtracts ſhow, that the annual marriages in England and Wales are to the whole population as 1 to $123\frac{1}{5}$,[a] a ſmaller proportion of marriages than obtains

[a] Obſerv. on the Reſults of the Population Act, p. 11. The anſwers to the Population Act have at length happily reſcued the queſtion of the population of this country from the obſcurity, in which it had been ſo long involved, and have afforded ſome very valuable data to the political calculator. At the ſame time it muſt be confeſſed, that they are not ſo complete, as entirely to exclude reaſonings and conjectures reſpecting the inferences which are to be drawn from them. It is earneſtly to be hoped, that the ſubject may not be ſuffered to drop after the preſent effort. Now that the firſt difficulty is removed, an enumeration every ten years might

obtains in any of the countries which have been examined, except Norway and Switzerland.

In the earlier part of the laſt century, Dr. Short eſtimated this proportion at about 1 to 115.[a] It is probable, that this calculation was then correct, and the preſent diminution in the proportion of marriages, notwithſtanding an increaſe of population, more rapid than formerly, owing to the more rapid progreſs of commerce and agriculture, is partly a cauſe, and partly a conſequence of the diminiſhed mortality that has been obſerved of late years.

The returns of the marriages, purſuant to the late act, are ſuppoſed to be leſs liable to the ſuſpicion of inaccuracy than any other parts of the regiſters.

Dr. Short, in his *New Obſervations on Town and Country Bills of Mortality*, ſays, he will "conclude with the obſervation of an emi-"nent Judge of this nation, that the growth "and increaſe of mankind is more ſtinted from "the cautious difficulty people make to enter "on marriage, from the proſpect of the trouble

be rendered eaſy and familiar; and the regiſters of births, deaths, and marriages, might be received every year, or at leaſt every five years. I am perſuaded, that more inferences are to be drawn, reſpecting the internal ſtate of a country, from ſuch regiſters, than we have yet been in the habit of ſuppoſing.

[a] New Obſerv. on Bills of Mortality, p. 265. 8vo. 1750.

"and

" and expenſes in providing for a family, than " from any thing in the nature of the ſpecies." And, in conformity to this idea, Dr. Short propoſes to lay heavy taxes and fines on thoſe who live ſingle, for the ſupport of the married poor.[a]

The obſervation of the eminent Judge is, with regard to the numbers which are prevented from being born, perfectly juſt; but the inference, that the unmarried ought to be puniſhed, does not appear to be equally ſo. The prolific power of nature is very far indeed from being called fully into action in this country. And yet when we contemplate the inſufficiency of the price of labour to maintain a large family, and the quantum of mortality which ariſes directly and indirectly from poverty; and add to this the crowds of children, which are cut off prematurely in our great towns, our manufactories, and our workhouſes; we ſhall be compelled to acknowledge, that, if the number born annually were not greatly thinned by this premature mortality, the funds for the maintenance of labour muſt increaſe with much greater rapidity than they have ever done hitherto in this country, in order to find work and food for the additional numbers, that would then grow up to manhood.

[a] New Obſerv. on Bills of Mortality, p. 247. 8vo. 1750.

Thoſe, therefore, who live ſingle, or marry late, do not by ſuch conduct contribute in any degree, to diminiſh the actual population; but merely to diminiſh the proportion of premature mortality, which would otherwiſe be exceſſive; and conſequently in this point of view do not ſeem to deſerve any very ſevere reprobation or puniſhment.

The returns of the births and deaths are ſuppoſed, on good grounds, to be deficient, and it will therefore be difficult to eſtimate, with any degree of accuracy, the proportion which they bear to the whole population.

If we divide the exiſting population of England and Wales by the average of burials for the five years ending in 1800, it would appear, that the mortality was only 1 in 49;[a] but this is a proportion ſo extraordinarily ſmall, conſidering the number of our great towns and manufactories, that it cannot be conſidered as approaching to the truth.

Whatever may be the exact proportion of the inhabitants of the towns to the inhabitants of the country, the ſouthern part of this iſland certainly ranks in that claſs of ſtates, where this proportion is greater than 1 to 3; indeed there

[a] The population is taken at 9,168,000, and the annual deaths at 186,000. (Obſ. on the Reſults of Pop. Act, p. 6 & 9.)

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is ample reaſon to believe, that it is greater than 1 to 2. According to the rule laid down by Crome, the mortality ought conſequently to be above 1 in 30;[a] according to Suſſmilch, above 1 in 33;[b] In the *Obſervations on the Reſults of the Population Act*,[c] many probable cauſes of deficiency in the regiſtry of the burials are pointed out; but no calculation is offered reſpecting the ſum of theſe deficiencies, and I have no data whatever to ſupply ſuch a calculation. I will only obſerve, therefore, that, if we ſuppoſe them altogether to amount to ſuch a number as will make the preſent annual mortality about 1 in 40, this muſt appear to be the loweſt proportion of deaths that can well be ſuppoſed, conſidering the circumſtances of the country; and, if true, would indicate a moſt aſtoniſhing ſuperiority over the generality of other ſtates, either in the habits of the people with reſpect to prudence and cleanlineſs, or in natural healthineſs of ſituation.[d] Indeed it ſeems to

[a] Ueber die Bevölkerung der Europaiſchen Staaten, p. 127.

[b] Suſſmilch, Göttliche Ordnung, vol. iii, p. 60. [c] p. 6.

[d] It is by no means ſurpriſing, that our population ſhould have been underrated formerly, at leaſt by any perſon who attempted to eſtimate it from the proportion of births or deaths. Till the late Population Act, no one could have imagined, that the actual returns of annual deaths, which might

to be nearly aſcertained, that both theſe cauſes, which tend to diminiſh mortality, operate in this country to a conſiderable degree. The ſmall proportion of annual marriages mentioned before indicates, that habits of prudence extremely favourable to happineſs prevail through a large part of the community in ſpite of the poor-laws; and it appears from the cleareſt evidence, that the generality of our country pariſhes are very healthy. Dr. Price quotes an account of Dr. Percival, collected from the miniſters of different pariſhes, and taken from poſitive enumerations, according to which, in ſome villages only a 45th, a 50th, a 60th, a 66th, and even a 75th, part dies annually. In many of theſe pariſhes the births are to the deaths above 2 to 1, and in a ſingle pariſh above 3 to 1[a]. Theſe

might naturally have been expected to be as accurate in this country as in others, would turn out to be leſs than a 49th part of the population. If the actual returns for France, even ſo long ago as the ten years ending with 1780, had been multiplied by 49, ſhe would have appeared at that time to have a population of above 40 millions. The average of annual deaths was 818,491. Necker de l'Adminiſtration des Finances, tom. i, c. ix, p. 255. 12mo. 1785.

[a] Price's Obſerv. on Reverſ. Paym. vol. ii, note, p. 10. Firſt additional Eſſay, 4th edit. In particular pariſhes, private communications

Theſe however are particular inſtances, and cannot be applied to the agricultural part of the country in general. In ſome of the flat ſituations, and particularly thoſe near marſhes, the proportions are found very different, and in a few the deaths exceed the births. In the 54 country pariſhes, the regiſters of which Dr. Short collected, chooſing them purpoſely in a great variety of ſituations, the average mortality was as high as 1 in 37.[a] This is certainly much above the preſent mortality of our agricultural pariſhes in general. The period which Dr. Short took included ſome conſiderable epidemics, which may poſſibly have been above the uſual proportion. But ſickly ſeaſons ſhould always be included, or we ſhall fall into great errors. In 1056 villages of Brandenburgh, which Suſſmilch examined, the mortality for ſix good years was 1 in 43; for 10 mixed years about 1 in 38½.[b] In the villages of England which Sir F. M. Eden mentions, the mortality ſeems to be

munications are perhaps more to be depended upon than public returns; becauſe in general thoſe clergymen only are applied to, who are in ſome degree intereſted in the ſubject, and of courſe take more pains to be accurate.

[a] New Obſervations on Bills of Mortality, table ix, p. 133.

[b] GöttlicheOrdnung, vol. i, c. ii, ſ. xxi. p. 74.

about

about 1 in 47 or 48;[a] and in the late returns purſuant to the Population Act, a ſtill greater degree of healthineſs appears. Combining theſe obſervations together, if we take 1 in 46 or 1 in 48, as the average mortality of the agricultural part of the country including ſickly ſeaſons, this will be the loweſt that can be ſuppoſed with any degree of probability. But this proportion will certainly be raiſed to 1 in 40, when we blend it with the mortality of the towns, and the manufacturing part of the community, in order to obtain the average for the whole kingdom.

The mortality in London, which includes ſo conſiderable a part of the inhabitants of this country, was, according to Dr. Price, at the time he made his calculations, 1 in $20\frac{3}{4}$; in Norwich 1 in $24\frac{1}{2}$; in Northampton 1 in $26\frac{1}{2}$; in Newbury 1 in $27\frac{1}{2}$;[b] in Mancheſter 1 in 28; in Liverpool 1 in $27\frac{1}{2}$,[c] &c. He obſerves, that the number dying annually in towns is ſeldom ſo low as 1 in 28, except in conſequence of a rapid increaſe produced by an influx of people at thoſe periods of life when the feweſt die,

[a] Eſtimate of the number of Inhabitants in G. Britain.

[b] Price's Obſerv. on Reverſ. Paym. vol. i, note p. 272.

[c] Id. vol. ii, Firſt additional Eſſay, note, p. 4.

which

which is the caſe with Mancheſter and Liverpool,[a] and other very flouriſhing manufacturing towns. In general he thinks, that the mortality in great towns may be ſtated at from 1 in 19[b] to 1 in 22 and 23; in moderate towns, from 1 in 24 to 1 in 28; and in the country villages, from 1 in 40 to 1 in 50.[c]

The tendency of Dr. Price to exaggerate the unhealthineſs of towns may perhaps be objected to theſe ſtatements; but the objection ſeems to be only of weight with regard to London. The accounts from the other towns, which are given, are from documents, which his particular opinions could not influence.[d] It ſhould be remarked, however, that there is good reaſon to believe, that not only London but the other

[a] Price's Obſerv. on Reverſ. Paym. vol. ii, Firſt additional Eſſay, note, p. 4.

[b] The mortality at Stockholm was, according to Wargentin, 1 in 19. [c] Obſerv. on Reverſ. Paym. vol. ii, Firſt Additional Eſſay, p. 4.

[d] An eſtimate of the population or mortality of London before the late enumeration always depended much on conjecture and opinion, on account of the great acknowledged deficiencies in the regiſters; but this was not the caſe in the ſame degree with the other towns here named. Dr. Price, in alluſion to a diminiſhing population, on which ſubject it appears that he has ſo widely erred, ſays very candidly, that perhaps he may have been inſenſibly influenced to maintain an opinion once advanced.

towns

towns in England, and probably alſo country villages, were at the time of theſe calculations leſs healthy than at preſent. Dr. Willian Heberden obſerves, that the regiſters of the ten years from 1759 to 1768,[a] from which Dr Price calculated the probabilities of life in London, indicate a much greater degree of unhealthineſs than the regiſters of late years. And the returns purſuant to the population act, even after allowing for great omiſſions in the burials, exhibit in all our provincial towns, and in the country, a degree of healthineſs much greater than had before been calculated. At the ſame time I cannot but think, that 1 in 31, the proportion of mortality for London mentioned in the *Obſervations on the Reſults of the Population Act*,[b] is ſmaller than the truth. Five thouſand are not probably enough to allow for the omiſſions in the burials; and the abſentees in the employments of war and commerce are not ſufficiently adverted to. In eſtimating the proportional mortality the reſident population alone ſhould be conſidered.

There certainly ſeems to be ſomething in great towns, and even in moderate towns, pe-

[a] Increaſe and Decreaſe of Diſeaſes, p. 32, 4to. 1801.

[b] p. 13.

culiarly

culiarly unfavourable to the very early ſtages of life; and the part of the community on which the mortality principally falls ſeems to indicate, that it ariſes more from the cloſeneſs and foulneſs of the air, which may be ſuppoſed to be unfavourable to the tender lungs of children, and the greater confinement, which they almoſt neceſſarily experience, than from the ſuperior degree of luxury and debauchery uſually and juſtly attributed to towns. A married pair with the beſt conſtitutions, who lead the moſt regular and quiet life, ſeldom find, that their children enjoy the ſame health in towns as in the country.

In London, according to former calculations, one half of the born died under three years of age; in Vienna and Stockholm under two; in Mancheſter under five; in Norwich under five; in Northampton under ten.[a] In country villages, on the contrary, half of the born live till thirty, thirty five, forty, forty-ſix, and above. In the pariſh of Ackworth, in Yorkſhire, it appears from a very exact account kept by Dr Lee of the ages at which all died there for 20 years, that half of the inhabitants live to the age of

[a] Price's Obſerv. on Reverſ. Paym. vol. i, p. 264—266, 4th edit.

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46;[a] and there is little doubt, that, if the ſame kind of account had been kept in ſome of thoſe pariſhes before mentioned, in which the mortality is ſo ſmall as 1 in 60, 1 in 66, and even 1 in 75, half of the born would be found to have lived to 50 or 55.

As the calculations reſpecting the ages to which half of the born live in towns depend more upon the births and deaths which appear in the regiſters, than upon any eſtimates of the number of people, they are on this account leſs liable to uncertainty, than the calculations reſpecting the proportion of the inhabitants of any place which dies annually.

To fill up the void occaſioned by this mortality in towns, and to anſwer all further demands for population, it is evident, that a conſtant ſupply of recruits from the country is neceſſary; and this ſupply appears in fact to be always flowing in from the redundant births of the country. Even in thoſe towns where the births exceed the deaths, this effect is produced by the marriages of perſons not born in the place. At a time when our provincial towns were increaſing much leſs rapidly than at

[a] Price's Obſerv. on Reverſ. Paym. vol. i, p. 268.

preſent,

preſent, Dr. Short calculated that $\frac{2}{11}$ of the married were ſtrangers[a]. Of 1618 married men, and 1618 married women, examined at the Weſtminſter Infirmary, only 329 of the men, and 495 of the women, had been born in London[b].

Dr. Price ſuppoſes, that London with its neighbouring pariſhes, where the deaths exceed the births, requires a ſupply of 10,000 perſons annually. Graunt, in his time, eſtimated this ſupply for London alone at 6000[c]; and he further obſerves, that, let the mortality of the city be what it will, ariſing from plague or any other great cauſe of deſtruction, it always fully repairs its loſs in two years[d].

As all theſe demands, therefore, are ſupplied from the country, it is evident, that we ſhould fall into a very great error, if we were to eſtimate the proportion of births to deaths for the whole kingdom by the proportion obſerved in country pariſhes, from which there muſt be ſuch numerous emigrations.

We need not however, accompany Dr. Price in his apprehenſions, that the country will be

[a] New Obſervations on bills of Mortality, p. 76.
[b] Price's Obſerv. on Reverſ. Paym. vol ii, p. 17.
[c] Short's New Obſerv. Abſtract from Graunt, p. 277.
[d] Id. p. 276.

depopulated by theſe emigrations, at leaſt as long as the funds for the maintenance of agricultural labour remain unimpaired. The proportion of births, as well as the proportion of marriages, clearly proves, that, in ſpite of our increaſing towns and manufactories, the demand on the country for people is by no means very preſſing.

If we divide the preſent population of England and Wales by the average number of baptiſms for the laſt five years, it will appear, that the baptiſms are to the population as 1 to very nearly 36[a]; but it is ſuppoſed, with reaſon, that there are great omiſſions in the baptiſms: and it is conjectured, that theſe omiſſions are greater than in the burials. On this point, however, I ſhould be inclined to think differently, at leaſt with reſpect to the laſt twenty years, though probably it was the caſe formerly. The increaſe of population during this period eſtimated from the births is not greater than is warranted by the proportion of births to deaths, which would have been the caſe, if the omiſſions in the births had been greater than in the deaths; and the abſolutely ſtationary number of

[a] Average medium of baptiſms for the laſt five years 255,426. Pop. 9,198,000. (Obſerv. on Reſults, p. 9.)

deaths

deaths during the laſt twenty years, notwithſtanding a conſiderable increaſe of births, ſeems to be rather inconſiſtent with the idea of greater omiſſions in the births.

Dr. Short eſtimated the proportion of births to the population of England as 1 to 28.[a] In the agricultural report of Suffolk, the proportion of births to the population was calculated at 1 to 30. For the whole of Suffolk, according to the late returns, this proportion is not much leſs than 1 to 33.[b] According to a correct account of thirteen villages from actual enumerations, produced by Sir F. M. Eden, the proportion of births to the population was as 1 to 33; and from another account on the ſame authority, taken from towns and manufacturing pariſhes, as 1 to 27 $\frac{3}{4}$.[c] If, combining all theſe circumſtances, and adverting, at the ſame time to the acknowledged deficiency in the regiſtry

[a] New Obſerv. p. 267. [b] In private inquiries, diſſenters and thoſe who do not chriſten their children will of courſe be reckoned in the population; conſequently ſuch inquiries, as far as they extend, will more accurately expreſs the true proportion of births; and we are fairly juſtified in making uſe of them, in order to eſtimate the acknowledged deficiency of births in the public returns.

[c] Eſtimate of the number of Inhabitants in G. Britain, &c. p. 27.

of births, and the known increaſe of our population of late years, we ſuppoſe the true proportion of the births to the population to be as 1 to 30; then aſſuming the preſent mortality to be 1 in 40, as before ſuggeſted, we ſhall nearly keep the proportion of baptiſms to burials, which appears in the late returns. The births will be to the deaths as 4 to 3 or $13\frac{1}{3}$ to 10, a proportion more than ſufficient to account for the increaſe of population, which has taken place ſince the American war, after allowing for thoſe who may be ſuppoſed to have died abroad.

In the *Obſervations on the Reſults of the Population Act* it is remarked, that the average duration of life in England appears to have increaſed in the proportion of 117 to 100,[a] ſince the year 1780. So great a change in ſo ſhort a time, if true, would be a moſt ſtriking phenomenon. But I am inclined to ſuſpect, that the whole of this proportional diminution of burials does not ariſe from increaſed healthineſs, but is occaſioned, in part, by the greater number of deaths which muſt neceſſarily have taken place abroad, owing to the very rapid increaſe of our foreign commerce ſince this period; and to the great number of perſons abſent in naval and mi-

[a] p. 6.

litary

litary employments, and the conſtant ſupply of freſh recruits neceſſary to maintain undiminiſhed ſo great a force. A perpetual drain of this kind would certainly have a tendency to produce the effect obſerved in the returns, and might keep the burials ſtationary, while the births and marriages were increaſing with ſome rapidity. At the ſame time, as the increaſe of population ſince 1780 is incontrovertible, and the preſent mortality extraordinarily ſmall, I ſhould ſtill be diſpoſed to believe, that the greater part of the effect is to be attributed to increaſed healthineſs.

A mortality of 1 in 36 is perhaps too ſmall a proportion of deaths for the average of the whole century; but a proportion of births to deaths as 12 to 10, calculated on a mortality of 1 in 36, would double the population of a country in 125 years, and is therefore as great a proportion of births to deaths as can be true for the average of the whole century. None of the late calculations imply a more rapid increaſe than this.

We muſt not ſuppoſe however, that this proportion of births to deaths, or any aſſumed proportion of births and deaths to the whole population, has continued nearly uniform throughout the century. It appears from the regiſters of every country which have been kept for any length of time, that conſiderable variations occur at

different periods. Dr. Short, about the middle of the century, eſtimated the proportion of births to deaths as 11 to 10;[a] and if the births were at the ſame time a twenty-eighth part of the population, the mortality was then as high as 1 in 30¼. We now ſuppoſe that the proportion of births to deaths is above 13 to 10; but if we were to aſſume this proportion as a criterion by which to eſtimate the increaſe of population for the next thirty or forty years, we ſhould probably fall into a very groſs error. The effects of the late ſcarcities are ſtrongly marked in the returns of the *Population Act* by a decreaſe of births and an increaſe of burials, and ſhould ſuch ſeaſons frequently recur, they would ſoon deſtroy the great exceſs of births which has been obſerved during the laſt twenty years; and indeed we cannot reaſonably ſuppoſe, that the reſources of this country ſhould increaſe for any long continuance with ſuch rapidity, as to allow of a permanent proportion of births to deaths as 13 to 10, unleſs indeed this proportion were principally cauſed by great foreign drains.

From all the data that could be collected, the proportion of births to the whole population of

[a] New Obſerv. tables ii, & iii, p. 22 & 44. Price's Obſerv. on Reverſ. Paym. vol. ii, p. 311.

England

England and Wales has been aſſumed to be as 1 to 30; but this is a ſmaller proportion of births, than has appeared in the courſe of this review to take place in any other country except Norway and Switzerland; and it has been hitherto uſual with political calculators, to conſider a great proportion of births as the ſureſt ſign of a vigorous and flouriſhing ſtate. It is to be hoped, however, that this prejudice will not laſt long. In countries circumſtanced like America or Ruſſia, or in other countries after any great mortality, a large proportion of births may be a favourable ſymptom; but in the average ſtate of a well-peopled territory, there cannot well be a worſe ſign than a large proportion of births, nor can there well be a better ſign than a ſmall proportion.

Sir Francis d'Ivernois very juſtly obſerves, that, "if the various ſtates of Europe kept and "publiſhed annually an exact account of their "population, noting carefully in a ſecond co-"lumn the exact age at which the children die, "this ſecond column would ſhow the relative "merit of the governments, and the compara-"tive happineſs of their ſubjects. A ſimple arith-"metical ſtatement would then perhaps be "more concluſive, than all the arguments that

"could be adduced."[a] In the importance of the inferences to be drawn from ſuch tables, I fully agree with him; and to make theſe inferences, it is evident, that we ſhould attend leſs to the column expreſſing the number of children born, than to the column expreſſing the number which ſurvived the age of infancy and reached manhood; and this number will almoſt invariably be the greateſt, where the proportion of the births to the whole population is the leaſt. In this point, we rank next after Norway and Switzerland, which, conſidering the number of our great towns and manufactories, is certainly a very extraordinary fact. As nothing can be more clear, than that all our demands for population are fully ſupplied, if this be done with a ſmall proportion of births, it is a decided proof of a very ſmall mortality, a diſtinction on which we may juſtly pride ourſelves. Should it appear from future inveſtigations, that I have made too great an allowance for omiſſions both in the births and in the burials, I ſhall be extremely happy to find, that this diſtinction, which, other circumſtances being the ſame, I conſider as the ſureſt teſt of happineſs and good government, is even greater than I have ſuppoſed it to be. In

[a] Tableau des Pertes, &c. c. ii, p. 16.

deſpotic,

deſpotic, miſerable, or naturally unhealthy countries the proportion of births to the whole population will generally be found very great.

On an average of the five years ending in 1800 the proportion of births to marriages is 347 to 100. In 1760 it was 362 to 100, from which an inference is drawn, that the regiſters of births, however deficient, were certainly not more deficient formerly than at preſent.[a] But a change of this nature, in the appearance of the regiſters, might ariſe from cauſes totally unconnected with deficiencies. If from the acknowledged greater healthineſs of the latter part of the century, compared with the middle of it, a greater number of children ſurvived the age of infancy, a greater proportion of the born would of courſe live to marry, and this circumſtance would produce a greater preſent proportion of marriages compared with the births. On the other hand, if the marriages were rather more prolific formerly than at preſent, owing to their being contracted at an earlier age, the effect would be a greater proportion of births compared with the marriages. The operation of either or both of theſe cauſes would produce exactly the effect obſerved in the regiſters; and conſequently from the exiſtence of ſuch an effect no inference can juſtly

[a] Obſervations on the Reſults of the Population Act, p.8.

be

be drawn againſt the ſuppoſed increaſing accuracy of the regiſters. The influence of the two caſes juſt mentioned on the proportions of annual births to marriages will be explained in a ſubſequent chapter.

With regard to the general queſtion, whether we have juſt grounds for ſuppoſing, that the regiſtry of births and deaths was more deficient in the former part of the century than in the latter part; I ſhould ſay, that the late returns tend to confirm the ſuſpicion of former inaccuracy, and to ſhow, that the regiſters of the earlier part of the century, in every point of view, afford very uncertain data on which to ground any eſtimates of paſt population. In the years 1710, 1720, and 1730, it appears from the returns, that the deaths exceeded the births; and taking the ſix periods ending in 1750,[a] including the firſt half of the century, if we compare the ſum of the births with the ſum of the deaths, the exceſs of the births is ſo ſmall, as to be perfectly inadequate to account for the increaſe of a million, which, upon a calculation from the births alone, is ſuppoſed to have taken

[a] Population Abſtract Pariſh Regiſters. Final Summary, p. 455.

place

place in that time.[a] Conſequently, either the regiſters are very inaccurate, and the deficiencies in the births greater than in the deaths; or theſe periods, each at the diſtance of ten years, do not expreſs the juſt average. Theſe particular years may have been more unfavourable with reſpect to the proportion of births to deaths than the reſt; indeed one of them, 1710, is known to have been a year of great ſcarcity and diſtreſs. But if this ſuſpicion, which is very probable, be admitted, ſo as to affect the ſix firſt periods, we may juſtly ſuſpect the contrary accident to have happened with regard to the three following periods ending with 1780; in which thirty years it would ſeem, by the ſame mode of calculation, that an increaſe of a million and a half had taken place.[b] At any rate it muſt be allowed, that the three ſeparate years, taken in this manner, can by no means be conſidered as ſufficient to eſtabliſh a juſt average; and what rather encourages the ſuſpicion, that theſe particular years might be more than uſually favourable with regard to births is, that the increaſe of births from 1780 to 1785 is unuſually ſmall,[c] which would naturally be the caſe without ſuppoſing a ſlower

[a] Obſervations on the Reſults of the Population Act, p.9.
[b] Ibid. [c] Ibid.

progreſs

progreſs than before, if the births in 1780 had been accidentally above the average.

On the whole, therefore, conſidering the probable inaccuracy of the earlier regiſters, and the very great danger of fallacy in drawing general inferences from a few detached years, I do not think, that we can depend upon any eſtimates of paſt population, founded on a calcution from the births, till after the year 1780, when every following year is given, and a juſt average of the births may be obtained. As a further confirmation of this remark I will juſt obſerve, that in the final ſummary of the abſtracts from the regiſters of England and Wales it appears, that in the year 1790 the total number of births was 248,774, in the year 1795, 247,218, and in 1800, 247,147.[a] Conſequently if we had been eſtimating the population from the births, taken at three ſeparate periods of five years, it would have appeared, that the population during the laſt ten years had been regularly decreaſing, though we have very good reaſon to believe, that it has increaſed conſiderably.

In the *Obſervations on the Reſults of the Population Act*,[b] a table is given of the population of

[a] Population Abſtract Pariſh Regiſters, p. 455. [b] p. 9.

England

England and Wales throughout the laſt century calculated from the births; but for the reaſons given above, little reliance can be placed on it; and for the population at the revolution, I ſhould be inclined to place more dependence on the old calculations from the number of houſes.

It is poſſible, indeed, though not probable, that theſe eſtimates of the population at the different periods of the century may not be very far from the truth, becauſe oppoſite errors may have corrected each other; but the aſſumption of the uniform proportion of births on which they are founded is falſe on the face of the calculations themſelves. According to theſe calculations, the increaſe of population was more rapid in the period from 1760 to 1780, than from 1780 to 1800; yet it appears, that the proportion of deaths about the year 1780 was greater than in 1800 in the ratio of 117 to 100. Conſequently the proportion of births before 1780 muſt have been much greater than in 1800, or the population in that period could not poſſibly have increaſed faſter. This overthrows at once the ſuppoſition of any thing like uniformity in the proportion of births.

I ſhould indeed have ſuppoſed from the analogy

analogy of other countries, and the calculations of Mr. King and Dr. Short, that the proportion of births at the beginning and in the middle of the century was greater than at the end. But this ſuppoſition would, in a calculation from the births, give a ſmaller population in the early part of the century, than is given in the *Reſults of the Population Act*, though there are ſtrong reaſons for ſuppoſing, that the population there given is too ſmall. According to Davenant, the number of houſes in 1690 was 1,319,215, and there is no reaſon to think, that this calculation erred on the ſide of exceſs. Allowing only 5 to a houſe inſtead of $5\frac{3}{7}$ which is ſuppoſed to be the proportion at preſent, this would give a population of above ſix millions and a half, and it is perfectly incredible, that from this time to the year 1710, the population ſhould have diminiſhed nearly a million and a half. It is far more probable that the omiſſions in the births ſhould have been much greater than at preſent, and greater than in the deaths; and this is further confirmed by the obſervation before alluded to, that in the firſt half of the century the increaſe of population as calculated from the births is much greater, than is warranted by the proportion of births to deaths.

deaths. In every point of view therefore the calculations from the births are little to be depended on.

It muſt indeed have appeared to the reader in the courſe of this work, that regiſters of births or deaths, excluding any ſuſpicion of deficiencies, muſt at all times afford very uncertain data for an eſtimate of population. On account of the varying circumſtances of every country, they are both precarious guides. From the greater apparent regularity of the births, political calculators have generally adopted them as the ground of their eſtimates in preference to the deaths. Necker, in eſtimating the population of France, obſerves, that an epidemic diſeaſe, or an emigration, may occaſion temporary differences in the deaths, and that therefore the number of births is the moſt certain criterion.[a] But the very circumſtance of the apparent regularity of the births in the regiſters will now and then lead into great errors. If in any country we can obtain regiſters of burials for two or three years together, a plague or mortal epidemic will always ſhow itſelf, from the very ſudden increaſe of the deaths during its operation, and the ſtill greater dimi-

[a] De l'Adminiſtration des Finances, tom. i, c. ix, p. 252. 12mo. 1785.

nution

nution of them afterwards. From theſe appearances, we ſhould of courſe be directed, not to include the whole of a great mortality in any very ſhort term of years. But there would be nothing of this kind to guide us in the regiſters of births; and after a country had loſt an eighth part of its population by a plague, an average of the five or ſix ſubſequent years might ſhow an increaſe in the number of births, and our calculations would give the population the higheſt at the very time that it was the loweſt. This appears very ſtrikingly in many of Suſſmilch's tables, and moſt particularly in a table for Pruſſia and Lithuania, which I ſhall inſert in a following chapter; where, in the year ſubſequent to the loſs of one third of the population, the births were conſiderably increaſed, and in an average of five years but very little diminiſhed; and this at a time when, of courſe, the country could have made but a very ſmall progreſs towards recovering its former population.

We do not know indeed of any extraordinary mortality which has occurred in England ſince 1700; and there are reaſons for ſuppoſing, that the proportions of the births and deaths to the population during the laſt century have not experienced ſuch great variations as in many countries

tries on the continent; at the ſame time it is certain, that the ſickly ſeaſons which are known to have occurred would, in proportion to the degree of their fatality, produce ſimilar effects; and the change which has been obſerved in the mortality of late years ſhould diſpoſe us to believe, that ſimilar changes might formerly have taken place reſpecting the births, and ſhould inſtruct us to be extremely cautious in applying the proportions, which are obſerved to be true at preſent, to paſt or future periods.

CHAP. VIII.

Of the Checks to Population in Scotland and Ireland.

An examination, in detail, of the ſtatiſtical account of Scotland would furniſh numerous illuſtrations of the principle of population; but I have already extended this part of the work ſo much, that I am fearful of tiring the patience of my readers; and ſhall therefore confine my remarks in the preſent inſtance to a few circumſtances, which have happened to ſtrike me.

On account of the acknowleged omiſſions in the regiſters of births, deaths, and marriages, in moſt of the pariſhes of Scotland, few juſt inferences can be drawn from them. Many give extraordinary reſults. In the pariſh of Croſſmichael[a] in Kircudbright, the mortality appears to be only 1 in 98, and the yearly marriages 1 in 192. Theſe proportions would imply the moſt unheard of healthineſs, and the moſt extraordinary operation of the preventive check;

[a] Statiſtical Account of Scotland, vol. i, p. 167.

but

but there can be but little doubt, that they are principally occaſioned by omiſſions in the regiſtry of burials, and the celebration of a part of the marriages in other pariſhes.

In general, however, it appears from regiſters that are ſuppoſed to be accurate, that in the country pariſhes the mortality is ſmall; and that the proportions of 1 in 45, 1 in 50, and 1 in 55, are not uncommon. According to a table of the probabilities of life, calculated from the bills of mortality in the pariſh of Kettle by Mr. Wilkie, the expectation of an infant's life is 46·6,[a] which is very high, and the proportion which dies in the firſt year is only $\frac{1}{16}$. Mr. Wilkie further adds, that from 36 pariſh accounts, publiſhed in the firſt volume, the expectation of an infant's life appears to be 40·3. But in a table which he has produced in the laſt volume, calculated for the whole of Scotland from Dr. Webſter's ſurvey, the expectation at birth appears to be only 31 years.[b] This, however, he thinks, muſt be too low, as it exceeds but little the calculations for the town of Edinburgh.

The Scotch regiſters appeared to be in gene-

[a] Statiſtical Account of Scotland, vol. ii, p. 407.

[b] Id. vol. xxi, p. 383.

ral ſo incomplete, that the returns of 99 pariſhes only are publiſhed in the Population Abſtract; and, if any judgment can be formed from theſe, they ſhow a very extraordinary degree of healthineſs, and a very ſmall proportion of births. The ſum of the population of theſe pariſhes in 1801 was 217,873;[a] the average of burials for 5 years ending in 1800, was about 3815; and of births 4928:[b] from which it would appear, that the mortality in theſe pariſhes was only 1 in 56, and the proportion of births 1 in 44. But theſe proportions are ſo extraordinary, that it is difficult to conceive that they approach near the truth. Combining them with the calculations of Mr. Wilkie, it will not appear probable, that the proportion of deaths and births in Scotland ſhould be ſmaller than what has been allowed for England and Wales; namely, 1 in 40 for the deaths, and 1 in 30 for the births, and it ſeems to be generally agreed, that the proportion of births to deaths is 4 to 3.[c]

With reſpect to the marriages, it will be ſtill more difficult to form a conjecture. They are regiſtered ſo irregularly, that no returns of them

[a] Population Abſtract, Pariſh Regiſters, p. 459.

[b] Id. p. 458.

[c] Statiſtical Account of Scotland, vol. xxi, p. 383.

are

are given in the Population Abſtract. I ſhould naturally have thought from the Statiſtical Account, that the tendency to marriage in Scotland was upon the whole greater than in England; but if it be true, that the births and deaths bear the ſame proportion to each other, and to the whole population, in both countries, the proportion of marriages cannot be very different. It ſhould be remarked, however, that ſuppoſing the operation of the preventive check to be exactly the ſame in both countries, and the climates to be equally ſalubrious, a greater degree of want and poverty would take place in Scotland, before the ſame mortality was produced as in England, owing to the ſmaller proportion of towns and manufactories in the former country than in the latter.

From a general view of the ſtatiſtical accounts the reſult ſeems clearly to be, that the condition of the lower claſſes of people in Scotland has been conſiderably improved of late years. The price of proviſions has riſen; but almoſt invariably the price of labour has riſen in a greater proportion; and it is remarked in moſt pariſhes, that more butcher's meat is conſumed among the common people than formerly; that they are both better lodged and better clothed; and

that their habits with reſpect to cleanlineſs are decidedly improved.

A part of this improvement is probably to be attributed to the increaſe of the preventive check. In ſome pariſhes a habit of later marriages is noticed, and in many places, where it is not mentioned, it may be fairly inferred, from the proportions of births and marriages, and other circumſtances. The writer of the account of the pariſh of Elgin,[a] in enumerating the general cauſes of depopulation in Scotland, ſpeaks of the diſcouragement to marriage from the union of farms, and the conſequent emigration of the flower of their young men of every claſs and deſcription, very few of whom ever return. Another cauſe that he mentions is the diſcouragement to marriage from luxury; at leaſt, he obſerves, till people are advanced in years, and then a puny race of children are produced. "Hence, how many men of every deſcription remain ſingle, and how many young "women of every rank are never married, who "in the beginning of this century, or even ſo "late as 1745, would have been the parents of "a numerous and healthy progeny."

In thoſe parts of the country where the po-

[a] Vol. v, p. 1.

pulation

pulation has been rather diminiſhed by the introduction of grazing, or an improved ſyſtem of huſbandry which requires fewer hands, this effect has chiefly taken place; and I have little doubt, that in eſtimating the decreaſe of the population, ſince the end of the laſt, or the beginning of the preſent century, by the proportion of births at the different periods, they have fallen into the error which has been particularly noticed with regard to Switzerland, and have in conſequence made the difference greater than it really is.[a]

The general inference on this ſubject, which I ſhould draw from the different accounts is, that the marriages are rather later than formerly. There are however ſome decided exceptions. In thoſe pariſhes where manufactures have been introduced which afford employment to children as ſoon as they have reached their 6th or 7th year, a habit of marrying early naturally follows; and while the manufacture continues to flouriſh and increaſe, the evil ariſ-

[a] One writer takes notice of this circumſtance, and obſerves, that formerly the births ſeem to have born a greater proportion to the whole population than at preſent. Probably, he ſays, more were born, and there was a greater mortality. Pariſh of Montquitter, vol. vi, p. 121.

ing from it is not very perceptible; though humanity muſt confeſs with a ſigh, that one of the reaſons why it is not ſo perceptible is, that room is made for freſh families by the unnatural mortality, which takes place among the children ſo employed.

There are other parts of Scotland, however, particularly the Weſtern Iſles, and ſome parts of the Highlands, where population has conſiderably increaſed from the ſubdiviſion of poſſeſſions; and where perhaps the marriages may be earlier than they were formerly, though not cauſed by the introduction of manufactures. Here the poverty which follows is but too conſpicuous. In the account of Delting in Shetland[a] it is remarked, that the people marry very young, and are encouraged to this by their landlords, who wiſh to have as many men on their grounds as poſſible to proſecute the ling fiſhery; but that they generally involve themſelves in debt and large families. The writer further obſerves, that formerly there were ſome old regulations called country acts, by one of which it was enacted, that no pair ſhould marry unleſs poſſeſſed of 40 l. Scots of free gear. This regulation is not now enforced. It is ſaid, that

[a] Vol. i, p. 385.

theſe

theſe regulations were approved and confirmed by the parliament of Scotland, in the reign of Queen Mary, or James VI.

In the account of Breſſay Burra and Quarff in Shetland,[a] it is obſerved, that the farms are very ſmall, and few have a plough. The object of the proprietors is to have as many fiſhermen on their lands as poſſible—a great obſtacle to improvements in agriculture. They fiſh for their maſters, who either give them a fee totally inadequate, or take their fiſh at a low rate. The writer remarks, that "in moſt countries the increaſe of population is reckoned an advantage, and juſtly. It is, however, the reverſe in the preſent ſtate of Shetland. The farms are ſplit. The young men are encouraged to marry without having any ſtock. The conſequence is poverty and diſtreſs. It is believed, that there is at preſent in theſe iſlands double the number of people, that they can properly maintain."

The writer of the account of Auchterderran,[b] in the county of Fife, ſays, that the meagre food of the labouring man is unequal to oppoſe the effects of inceſſant hard labour upon his conſtitution, and by this means his frame is

[a] Vol. x, p. 194. [b] Vol. i, p. 449.

worn

worn down before the time of nature's appointment; and adds, "That people continue voluntarily to enter upon ſuch a hard ſituation by marrying ſhows how far the union of the ſexes, and the love of independence, are principles of human nature." In this obſervation, perhaps the love of independence had better have been changed for the love of progeny.

The iſland of Jura[a] appears to be abſolutely overflowing with inhabitants in ſpite of conſtant and numerous emigrations. There are ſometimes 50 or 60 on a farm. The writer obſerves, that ſuch a ſwarm of inhabitants, where manufactures, and many other branches of induſtry are unknown, are a very great load upon the proprietors, and uſeleſs to the ſtate.

Another writer[b] is aſtoniſhed at the rapid increaſe of population, in ſpite of a conſiderable emigration to America in 1770, and a large drain of young men during the late war. He thinks it difficult to aſſign adequate cauſes for it; and obſerves, that, if the population continue to increaſe in this manner, unleſs ſome employment be found for the people, the country will ſoon be unable to ſupport them. And in the

[a] Vol. xii, p. 317.

[b] Pariſh of Lochalſh, county of Roſs, vol. xi, p. 422.

account

account of the pariſh of Callander[a] the writer ſays, that the villages of this place, and other villages in ſimilar ſituations, are filled with naked and ſtarving crowds of people, who are pouring down for ſhelter or for bread; and then obſerves, that, whenever the population of a town or village exceeds the induſtry of its inhabitants, from that moment the place muſt decline.

A very extraordinary inſtance of a tendency to rapid increaſe occurs in the regiſter of the pariſh of Duthil,[b] in the county of Elgin; and as errors of exceſs are not ſo probable as errors of omiſſion, it ſeems to be worthy of attention. The proportion of annual births to the whole population is as 1 to 12; of marriages as 1 to 55; and of deaths the ſame. The births are to the deaths as 70 to 15, or $4\frac{2}{3}$ to 1. We may ſuppoſe ſome inaccuracy reſpecting the number of deaths, which ſeems to err on the ſide of defect; but the very extraordinary proportion of the annual births, amounting to $\frac{1}{12}$ of the whole population, does not ſeem to be eaſily liable to error; and the other circumſtances reſpecting the pariſh tend to confirm the ſtatement. Out of a population of 830, there were only three

[a] Vol. xi, p. 574. [b] Vol. iv, p. 308.

bachelors,

bachelors, and each marriage yielded 7 children. Yet with all this the population is ſuppoſed to have decreaſed conſiderably ſince 1745; and it appears, that this exceſſive tendency to increaſe had been occaſioned by an exceſſive tendency to emigrate. The writer mentions very great emigrations; and obſerves, that whole tribes who enjoyed the comforts of life in a reaſonable degree, had of late years emigrated from different parts of Scotland, from mere humour, and a fantaſtical idea of becoming their own maſters and freeholders.

Such an extraordinary proportion of births, cauſed evidently by habits of emigration, ſhows the extreme difficulty of depopulating a country merely by taking away its people. Take but away its induſtry, and the ſources of its ſubſiſtence, and it is done at once.

It may be obſerved, that in this pariſh the average number of children to a marriage is ſaid to be 7, though from the proportion of annual births to annual marriages it would appear to be only $4\frac{2}{7}$. This difference occurs in many other pariſhes, from which we may conclude, that the writers of theſe accounts very judiciouſly adopted ſome other mode of calculation, than the mere uncorrected proportion of annual births

births to marriages; and probably founded the reſults they give, either on perſonal inquiries, or reſearches into their regiſters, to find the number of children, which had been born to each mother in the courſe of her marriage.

The women of Scotland appear to be prolific. The average of 6 children to a marriage is frequent; and of 7, and even $7\frac{1}{2}$, not very uncommon. One inſtance is very curious, as it appears as if this number was actually living to each marriage, which would of courſe imply, that a much greater number had been and would be born. In the pariſh of Nigg,[a] in the county of Kincardine, the account ſays, that there are 57 land families, and 405 children; which gives nearly $7\frac{1}{9}$ each; 42 fiſher families, and 314 children; nearly $7\frac{1}{2}$ each. Of the land families which have had no children there were 7; of the fiſhers, none. If this ſtatement be juſt, I ſhould conceive, that each marriage muſt have yielded, or would yield, in the courſe of its duration, as many as 9 or 10 births.

When from any actual ſurvey it appears, that there are about 3 living children to each marriage, or 5 perſons, or only $4\frac{1}{2}$ to a houſe, which are very common proportions, we muſt not infer,

[a] Vol. vii, p. 194.

that

that the average number of births to a marriage is not much above 3. We muſt recollect, that all the marriages or eſtabliſhments of the preſent year are of courſe without children; all of the year before have only one, all of the year before that can hardly be expected to have as many as two, and all of the fourth year preceding will certainly, in the natural courſe of things, have leſs than three. One out of five children is a very unuſual ſmall proportion to loſe in the courſe of ten years; and after ten years, it may be ſuppoſed, that the eldeſt begin to leave their parents; ſo that if each marriage be ſuppoſed accurately to yield 5 births in the courſe of its duration, the families which had increaſed to their full complement would only have 4 children, and a very large proportion of thoſe which were in the ſtages of increaſe would have leſs than three;[a] and conſequently taking into conſideration the number of families where one of the parents may be ſuppoſed to be dead, I much doubt whether in this caſe a ſurvey would give 4½ to a family. In the pariſh of Duthil,[b] already noticed, the number of children to a marriage

[a] It has been calculated, that, on an average, the difference of age in the children of the ſame family is about two years.

[b] Vol. iv, p. 308.

is

is mentioned as 7, and the number of perſons to a houſe as only 5.

The poor of Scotland are in general ſupported by voluntary contributions, diſtributed under the inſpection of the miniſter of the pariſh; and it appears, upon the whole, that they have been conducted with conſiderable judgment. Having no claim of right to relief,[a] and the ſupplies, from the mode of their collection, being neceſſarily uncertain, and never abundant, the poor have conſidered them merely as a laſt reſource in caſes of extreme diſtreſs, and not as a fund on which they might ſafely rely, and an adequate portion of which belonged to them by the laws of their country in all difficulties.

The conſequence of this is, that the common people make very conſiderable exertions to avoid the neceſſity of applying for ſuch a ſcanty and precarious relief. It is obſerved, in many of the accounts, that they ſeldom fail of making a proviſion for ſickneſs and for age; and in general, the grown up children and relations of

[a] It has lately been ſtated in Parliament, that the poor laws of Scotland are not materially different from thoſe of England, though they have been very differently underſtood and executed; but, whatever may be the laws on the ſubject, the practice is generally as here repreſented; and it is the practice alone that concerns the preſent queſtion.

perſons

perſons, who are in danger of falling upon the pariſh, ſtep forward, if they be in any way able to prevent ſuch a degradation, which is univerſally conſidered as a diſgrace to the family.

The writers of the accounts of the different pariſhes frequently reprobate in very ſtrong terms the ſyſtem of Engliſh aſſeſſments for the poor, and give a decided preference to the Scotch mode of relief. In the account of Paiſley,[a] though a manufacturing town, and with a numerous poor, the author ſtill reprobates the Engliſh ſyſtem, and makes an obſervation on this ſubject, in which perhaps he goes too far. He ſays, that though there are in no country ſuch large contributions for the poor as in England, yet there is no where ſo great a number of them; and their condition, in compariſon of *the poor of other countries, is truly moſt miſerable.*

In the account of Caerlaverock,[b] in anſwer to the queſtion, How ought the poor to be ſupplied? It is moſt judiciouſly remarked, "that "diſtreſs and poverty multiply in proportion to "the funds created to relieve them; that the "meaſures of charity ought to remain inviſible, "till the moment when it is neceſſary that they "ſhould be diſtributed; that in the country

[a] Vol. vii, p. 74. [b] Vol. vi, p. 21.

pariſhes

" pariſhes of Scotland in general, ſmall occa-
" ſional voluntary collections are ſufficient;
" that the legiſlature has no occaſion to inter-
" fere to augment the ſtream, which is already
" copious enough; in fine, that the eſtabliſh-
" ment of a poors rate would not only be un-
" neceſſary but hurtful, as it would tend to
" oppreſs the landholder, without bringing re-
" lief on the poor."

Theſe, upon the whole, appear to be the prevailing opinions of the clergy of Scotland. There are, however, ſome exceptions; and the ſyſtem of aſſeſſments is ſometimes approved, and the eſtabliſhment of it propoſed. But this is not to be wondered at. In many of theſe pariſhes the experiment had never been made; and without being thoroughly aware of the principle of population from theory, or having fully ſeen the evils of poor laws in practice, nothing ſeems on a firſt view of the ſubject more natural than the propoſal of an aſſeſſment; to which the uncharitable, as well as the charitable, ſhould be made to contribute, according to their abilities; and which might be increaſed or diminiſhed, according to the wants of the moment.

The endemic and epidemic diſeaſes in

Scotland fall chiefly, as is uſual, on the poor. The ſcurvy is in ſome places extremely troubleſome and inveterate; and in others it ariſes to a contagious leproſy, the effects of which are always dreadful, and not unfrequently mortal. One writer calls it the ſcourge and bane of human nature.[a] It is generally attributed to cold and wet ſituations, meagre and unwholeſome food, impure air from damp and crowded houſes, indolent habits, and the want of attention to cleanlineſs.

To the ſame cauſes, in great meaſure, are attributed the rheumatiſms which are general, and the conſumptions which are frequent, among the common people. Whenever, in any place, from particular circumſtances, the condition of the poor has been rendered worſe, theſe diſorders, particularly the latter, have been obſerved to prevail with greater force.

Low nervous fevers, and others of a more violent and fatal nature, are frequently epidemic, and ſometimes take off conſiderable numbers; but the moſt fatal epidemic, ſince the extinction of the plague, which formerly viſited Scotland, is the ſmall-pox, the returns of

[a] Pariſhes of Forbes and Kearn, County of Aberdeen, vol. xi, p. 189.

which

which are, in many places, at regular intervals; in others, irregular, but ſeldom at a greater diſtance than 7 or 8 years. Its ravages are dreadful, though in ſome pariſhes not ſo fatal as they were ſome time ago. The prejudices againſt inoculation are ſtill great; and as the mode of treatment muſt almoſt neceſſarily be bad in ſmall and crowded houſes, and the cuſtom of viſiting each other during the diſorder ſtill ſubſiſts in many places, it may be imagined, that the mortality muſt be conſiderable, and the children of the poor the principal ſufferers. In ſome pariſhes of the Weſtern Iſles and the Highlands, the number of perſons to a houſe has increaſed from $4\frac{1}{2}$ and 5, to $6\frac{1}{2}$ and 7. It is evident, that if ſuch a conſiderable increaſe, without the proper accommodations for it, do not abſolutely generate the diſeaſe, it muſt give to its devaſtations tenfold force when it arrives.

Scotland has at all times been ſubject to years of ſcarcity, and occaſionally even to dreadful famines. The years 1635, 1680, 1688, the concluding years of the 16th century, the years 1740, 1756, 1766, 1778, 1782, and 1783, are all mentioned, in different places, as years of very great ſufferings from want. In the year 1680, ſo many families periſhed from this cauſe,

that for ſix miles, in a well-inhabited extent, there was not a ſmoke remaining.[a] The ſeven years at the end of the 16th century, were called the ill years. The writer of the account of the pariſh of Montquhitter[b] ſays, that of 16 families, on a farm in that neighbourhood, 13 were extinguiſhed; and on another, out of 169 individuals, only 3 families, the proprietors included, ſurvived. Extenſive farms, now containing a hundred ſouls, being entirely deſolated, were converted into a ſheep walk. The inhabitants of the pariſh in general were diminiſhed by death to one half, or, as ſome affirm, to one fourth of the preceding number. Until 1709 many farms were waſte. In 1740, another ſeaſon of ſcarcity occurred, and the utmoſt miſery was felt by the poor, though it fell ſhort of death. Many offered in vain to ſerve for their bread. Stout men accepted thankfully two-pence a day in full for their work. Great diſtreſs was alſo ſuffered in 1782 and 1783, but none died. "If "at this critical period," the author ſays, "the "American war had not ceaſed; if the copious "magazines, particularly of peaſe, provided for "the navy, had not been brought to ſale, what

[a] Pariſh of Duthil, vol. iv, p. 308. [b] Vol. vi, p. 121.

"a ſcene

"a ſcene of deſolation and horror would have "been exhibited in this country!"

Many ſimilar deſcriptions occur in different parts of the Statiſtical account; but theſe will be ſufficient to ſhow the nature and intenſity of the diſtreſs which has been occaſionally felt from want.

The year 1783 depopulated ſome parts of the Highlands, and is mentioned as the reaſon why in theſe places the number of people was found to have diminiſhed ſince Dr. Webſter's ſurvey. Moſt of the ſmall farmers in general, as might be expected, were abſolutely ruined by the ſcarcity; and thoſe of this deſcription in the Highlands were obliged to emigrate to the Lowlands as common labourers,[a] in ſearch of a precarious ſupport. In ſome pariſhes, at the time of the laſt ſurvey, the effect of the ruin of the farmers, during this bad year, was ſtill viſible in their depreſſed condition, and the increaſed poverty and miſery of the common people, which is a neceſſary conſequence of it.

In the account of the pariſh of Grange,[b] in the county of Banff, it is obſerved, that the year 1783 put a ſtop to all improvements by

[a] Pariſh of Kincardine, County of Roſs, vol. iii, p. 505.

[b] Vol. ix, p. 550.

green crops, and made the farmers think of nothing but raiſing grain. Tenants were moſt of them ruined. Before this period, conſumptions were not near ſo frequent as they have been ſince. This may be juſtly attributed to the effects of the ſcarcity and bad victual in the year 1783, to the long inclement harveſts in 1782 and 1787, in both which ſeaſons the labourers were expoſed to much cold and wet during the three months that the harveſts continued; but principally to the change that has of late taken place in the manner of living among the lower ranks. Formerly every houſeholder could command a draught of ſmall beer, and killed a ſheep now and then out of his own little flock; but now the caſe is different. The frequent want of the neceſſaries of life among the poor, their damp and ſtinking houſes, and dejection of mind among the middling claſſes, appear to be the principal cauſes of the prevailing diſtempers, and mortality of this pariſh. Young people are cut off by conſumptions, and the more advanced by dropſies and nervous fevers.

The ſtate of this pariſh, which, though there are others like it, may be conſidered as an exception to the average ſtate of Scotland, was, without doubt, occaſioned by the ruin of the tenants;

tenants; and the effect is not to be wondered at, as no greater evil can eaſily happen to a country, than the loſs of agricultural ſtock and capital.

We may obſerve, that the diſeaſes of this pariſh are ſaid to have increaſed, in conſequence of the ſcarcity and bad victual of 1783. The ſame circumſtance is noticed in many other pariſhes and it is remarked, that though few people died of abſolute famine, yet that mortal diſeaſes almoſt univerſally followed.

It is remarked alſo, in ſome pariſhes, that the number of births and marriages are affected by years of ſcarcity and plenty.

Of the pariſh of Dingwall,[a] in the county of Roſs, it is obſerved that, after the ſcarcity of 1783, the births were 16 below the average, and 14 below the loweſt number of late years. The year 1787 was a year of plenty, and the following year the births increaſed in a ſimilar proportion, and were 17 above the average, and 11 above the higheſt of the other years.

In the account of Dunroſſneſs,[b] in Orkney, the writer ſays that the annual number of marriages depends much on the ſeaſons. In good years they may amount to thirty or upwards;

[a] Vol. iii, p. i. [b] Vol. vii, p. 391.

but when crops fail, will hardly come up to the half of that number.

The whole increaſe of Scotland, ſince the time of Dr. Webſter's ſurvey in 1755, is about 260,000,[a] for which a proportionate proviſion has been made in the improved ſtate of agriculture and manufactures, and in the increaſed cultivation of potatoes, which in ſome places form two thirds of the diet of the common people. It has been calculated, that the half of the ſurplus of births in Scotland is drawn off in emigrations; and it cannot be doubted, that this drain tends greatly to relieve the country, and to improve the condition of thoſe which remain. Scotland is certainly ſtill overpeopled, but not ſo much as it was a century or half a century ago, when it contained fewer inhabitants.

The details of the population of Ireland are but little known. I ſhall only obſerve therefore, that the extended uſe of potatoes has allowed of a very rapid increaſe of it during the laſt century. But the cheapneſs of this nouriſhing root, and the ſmall piece of ground which under this kind of cultivation, will in average years pro-

[a] According to the returns in the late eſtimate, the whole population of Scotland is above 1,590,000, and therefore the increaſe up to the preſent time is above 320,000.

duce

duce the food for a family, joined to the ignorance and barbariſm of the people, which have prompted them to follow their inclinations with no other proſpect than an immediate bare ſubſiſtence, have encouraged marriage to ſuch a degree, that the population is puſhed much beyond the induſtry and preſent reſources of the country; and the conſequence naturally is, that the lower claſſes of people are in the moſt depreſſed and miſerable ſtate. The checks to the population are of courſe chiefly of the poſitive kind, and ariſe from the diſeaſes occaſioned by ſqualid poverty, by damp and wretched cabins, by bad and inſufficient clothing, by the filth of their perſons, and occaſional want. To theſe poſitive checks have, of late years, been added the vice and miſery of inteſtine commotion, of civil war, and of martial law.

CHAP. IX.

On the fruitfulneſs of Marriages.

It would be extremely deſirable, to be able to deduce from the rate of increaſe, the actual population, and the regiſters of births, deaths and marriages, in different countries, the real prolifickneſs of marriages, and the true proportion of the born which lives to marry. Perhaps the problem may not be capable of an accurate ſolution, but we ſhall make ſome approximation towards it, and be able to account for ſome of the difficulties which appear in many regiſters, if we attend to the following conſiderations.

It ſhould be premiſed however, that in the regiſters of moſt countries there is ſome reaſon to believe, that the omiſſions in the births and deaths are greater than in the marriages; and conſequently, that the proportion of marriages is almoſt always given too great. In the enumeration which lately took place in this country, while it is ſuppoſed with reaſon, that the regiſtry of marriages is nearly correct, it is known with certainty, that there are very great omiſſions in the births and deaths; and it is probable,

that

that ſimilar omiſſions, though not perhaps to the ſame extent, prevail in other countries.

To form a judgment of the prolifickneſs of marriages, taken as they occur, including ſecond and third marriages, let us cut off a certain period of the regiſters of any country, 30 years for inſtance, and inquire what is the number of births which have been produced by all the marriages included in the period cut off. It is evident, that with the marriages at the beginning of the period will be arranged a number of births proceeding from marriages not included in the period; and at the end, a number of births produced by the marriages included in the period will be found arranged with the marriages of a ſucceeding period. Now if we could ſubtract the former number, and add the latter, we ſhould obtain exactly all the births produced by the marriages of the period, and of courſe the real prolifickneſs of thoſe marriages. If the population be ſtationary, the number of births to be added would exactly equal the number to be ſubtracted, and the proportion of births to marriages, as found in the regiſters, would exactly repreſent the real prolifickneſs of marriages. But if the population be either increaſing or decreaſing, the number to be added would never be

be equal to the number to be ſubtracted, and the proportion of births to marriages in the regiſters would never truly repreſent the prolificknefs of marriages. In an increaſing population the number to be added would evidently be greater than the number to be ſubtracted, and of courſe the proportion of births to marriages, as found in the regiſters, would always be too ſmall to repreſent the true prolificknefs of marriages. And the contrary effect would take place in a decreaſing population. The queſtion therefore is, what we are to add and what to ſubtract, when the births and deaths are not equal.

The average proportion of births to marriages in Europe is about 4 to 1. Let us ſuppoſe for the ſake of illuſtration, that each marriage yields four children, one every other year.* In this caſe it is evident, that wherever you begin your period in the regiſters, the marriages of the preceding eight years will only have produced half of their births, and the other half will be arranged with the marriages included in the period, and ought to be ſubtracted from them. In the ſame manner, the

* In the ſtatiſtical account of Scotland it is ſaid, that the average diſtance between the children of the ſame family has been calculated to be about two years.

marriages

marriages of the laſt eight years of the period will only have produced half of their births, and the other half ought to be added. But half of the births of any eight years may be conſidered as nearly equal to all the births of the ſucceeding $3\frac{3}{4}$ years. In inſtances of the moſt rapid increaſe it will rather exceed the births of the next $3\frac{1}{2}$ years, and in caſes of ſlow increaſe, approach towards the births of the next 4 years. The mean therefore may be taken at $3\frac{3}{4}$ years.* Conſequently if we ſubtract the births of the firſt $3\frac{3}{4}$ years of the period, and add the births of the $3\frac{3}{4}$ years ſubſequent to the period, we ſhall have a number of births nearly equal to the births produced by all the marriages included in the period, and of courſe the prolificknefs of theſe marriages. But if the population of a country be increaſing regularly, and the births, deaths, and marriages continue always to bear the ſame proportion to each other, and to the whole population, it is evident, that all the births of any period will bear the ſame proportion to all the births of any other period of the ſame extent, taken a certain number of years later, as the births of

* According to the rate of increaſe which is now taking place in England, the period by calculation would be about $3\frac{3}{4}$ years.

any

any ſingle year to the births of a ſingle year taken the ſame number of years later; and the ſame will be true with regard to the marriages. And conſequently to eſtimate the prolifickneſs of marriages, we have only to compare the marriages of the preſent or any other year, with the births of a ſubſequent year, taken $3\frac{3}{4}$ years later.

We have ſuppoſed in the preſent inſtance, that each marriage yields four births; but the average proportion of births to marriages in Europe is 4 to 1,[a] and as the population of Europe is known to be increaſing at preſent, the prolifickneſs of marriages muſt be greater than 4. If allowing for this circumſtance, we take the diſtance of 4 years inſtead of $3\frac{3}{4}$ years, we ſhall probably be not far from the truth. And though undoubtedly the period will differ in different countries, yet it will not differ ſo much as we might at firſt imagine; becauſe in countries where the marriages are more prolific, the births generally follow at ſhorter intervals, and where they are leſs prolific at longer intervals; and with different degrees

[a] I think the proportion is probably greater, as there is reaſon to believe, that in all regiſters the omiſſions in the births and deaths are more numerous than in the marriages.

of

of prolificknes, the length of the period might ſtill remain the ſame.[a]

It will follow from theſe obſervations, that the more rapid is the increaſe of population, the more will the real prolificknes of marriages exceed the proportion of births to marriages in the regiſters.

The rule which has been here laid down attempts to eſtimate the prolificknes of marriages taken as they occur; but this prolificknes ſhould be carefully diſtinguiſhed from the prolificknes of firſt marriages and of married women, and ſtill more from the natural prolificknes of women in general taken at the moſt favourable age. It is probable, that the natural prolificknes of women is nearly the ſame in moſt parts of the world; but the prolificknes of marriages is liable to be affected by a variety of circumſtances peculiar to each country, and particularly by the number of late marriages. In all countries the ſecond and third marriages alone form a moſt

[a] In places where there are many exports and imports of people, the calculations will of courſe be diſturbed. In towns, particularly, where there is a frequent change of inhabitants, and where it ſo often happens, that the marriages of the people in the neighbouring country are celebrated, the inferences from the proportion of births to marriages are not to be depended on.

important

important conſideration, and materially influence the average proportions. According to Suſſmilch, in all Pomerania, from 1748 to 1756 both included, the number of perſons who married were 56,956, and of theſe 10,586 were widows and widowers.[a] According to Buſching in Pruſſia and Sileſia for the year 1781, out of 29,308 perſons who married, 4,841 were widows and widowers,[b] and conſequently the proportion of marriages will be given full one ſixth too much. In eſtimating the prolificknefs of married women the number of illegitimate births[c] would tend, though in a very ſlight degree, to counterbalance the overplus of marriages; and as it is found that the number of widowers who marry again, is greater than the number of widows, the whole of the correction ſhould not on this account be applied; but in eſtimating the proportion of the born which lives to marry from a compariſon of the marriages and deaths, which is what we are now about to proceed to, the whole of this correction is always neceſſary.

To find the proportion of the born which

[a] Gottliche Ordnung, vol. i, tables, p. 98. [b] Suſſmilch, vol. iii, tables, p. 95. [c] In France before the revolution the proportion of illegitimate births was $\frac{1}{17}$ of the whole number. Probably it is leſs in this country.

lives

lives to marry, we muſt firſt ſubtract one ſixth from the marriages, and then compare the marriages of any year ſo corrected, with the deaths in the regiſters at ſuch a diſtance from them, as is equal to the difference between the average age of marriage and the average age of death.

Thus, for example, if the proportion of marriages to deaths were as 1 to 3, then ſubtracting one ſixth from the marriages this proportion would be as 5 to 18, and the number of perſons marrying annually the firſt time would be to the number of annual deaths as 10 to 18. Suppoſing in this caſe the mean age of death to be ten years later than the mean age of marriage, in which ten years the deaths would increaſe $\frac{1}{9}$, then the number of perſons marrying annually the firſt time, compared with the number of annual deaths, at the diſtance of the difference between the age of marriage and the age of death, would be as 10 to 20; from which it would follow that exactly half of the born lived to marry.

The grounds of this rule will appear from the following obſervations on regiſters in general.

In a country in which the population is ſtationary, the contemporary deaths compared with the births will be equal, and will of courſe repreſent the deaths of all the born; and the

marriages, or more properly the number of married perſons, compared with both the births and deaths, will, when a proper allowance has been made for ſecond and third marriages, repreſent the true proportion of the born which lives to marry. But if the population be either increaſing or decreaſing, and the births, deaths, and marriages increaſing or decreaſing in the ſame ratio, then the deaths compared with the births, and the marriages compared with the births and deaths, will ceaſe to expreſs what they did before, unleſs the events which are contemporary in the regiſters are alſo contemporary in the order of nature.

In the firſt place it is evident that death cannot be contemporary with birth, but muſt on an average be always at ſuch a diſtance from it as is equal to the expectation of life, or the mean age of death. Conſequently though the deaths of all the born are, or will be, in the regiſters, where there are no emigrations, yet, except when the population is ſtationary, the contemporary periods of births and deaths never ſhow this, and we can only expect to find the deaths equal to the births, if the deaths be taken at ſuch a diſtance from the births in the regiſters as is equal to the expectation of life. And in fact,

thus

thus taken, the births and deaths will always be found equal.

Secondly, the marriages of any year can never be contemporary with the births from which they have reſulted, but muſt always be at ſuch a diſtance from them as is equal to the average age of marriage. If the population be increaſing, the marriages of the preſent year have reſulted from a ſmaller number of births than the births of the preſent year, and of courſe the marriages, compared with the contemporary births, will always be too few to repreſent the proportion of the born which lives to marry, and the contrary will take place if the population be decreaſing; and to find this proportion, we muſt compare the marriages of any year with the births of a previous year at the diſtance of the average age of marriage.

Thirdly, the average age of marriage will almoſt always be much nearer to the average age of death than marriage is to birth; and conſequently the annual marriages compared with the contemporary annual deaths will much more nearly repreſent the true proportion of the born living to marry, than the marriages compared with the births.[a] The marriages

[a] Dr. Price very juſtly ſays (Obſerv. on Reverſ. Pay. vol. i, p. 269.

marriages compared with the births, after a proper allowance has been made for ſecond and

p. 269. 4th edit.) " that the general effect of an increaſe " while it is going on in a country is to render the propor- " tion of perſons marrying annually, to the annual deaths " *greater* and to the annual births *leſs* than the true proportion " marrying out of any given number born. This proportion " generally lies between the other two proportions, but al- " ways neareſt the firſt." In theſe obſervations I entirely agree with him, but in a note to this paſſage he appears to me to fall into an error. He ſays, that if the prolificknefs of marriages be increaſed (the *probabilities of life* and *the encouragement to marriage* remaining the ſame) both the annual births and burials would increaſe in proportion to the annual weddings. That the proportion of annual births would increaſe is certainly true, and I here acknowledge my error in differing from Dr. Price on this point in my laſt edition; but I ſtill think that the proportion of burials to weddings would not neceſſarily increaſe under the circumſtances here ſuppoſed.

The reaſon why the proportion of births to weddings increaſes is, that the births occurring in the order of nature conſiderably prior to the marriages which reſult from them, their increaſe will affect the regiſter of births much more than the contemporary regiſter of marriages. But the ſame reaſon by no means holds with regard to the deaths, the average age of which is generally later than the age of marriage. And in this caſe, after the firſt interval between birth and marriage, the permanent effect would be, that the regiſter of marriages would be more affected by the increaſe of births, than the contemporary regiſter of deaths; and conſequently the proportion of the burials to the weddings would be rather decreaſed than increaſed. From not attending to the circumſtance that the

average

and third marriages, can never repreſent the true proportion of the born living to marry, unleſs when the population is abſolutely ſtationary; but although the population be increaſing or decreaſing according to any ratio, yet the average age of marriage may ſtill be equal to the average of death; and in this caſe the marriages in the regiſters compared with the contemporary deaths, after the correction for ſecond and third marriages, will repreſent the true proportion of the born living to marry.[a] Generally however, when an increaſe of population is going forwards, the average age of marriage is leſs than the average of death, and then the proportion of marriages, compared with the contemporary deaths, will be too great to repreſent the true proportion of the born living to marry, and to find this proportion, we muſt compare the mar-

average age of marriage may often be conſiderably earlier than the mean age of death, the general concluſion alſo which Dr. Price draws in this note does not appear to be ſtrictly correct.

[a] The reader will be aware, that as all the born muſt die, deaths may in ſome caſes be taken as ſynonimous with births. If we had the deaths regiſtered of all the births which had taken place in a country during a certain period, diſtinguiſhing the married from the unmarried, it is evident, that the number of thoſe who died married, compared with the whole number of deaths, would accurately expreſs the proportion of the *births* which had lived to marry.

riages of any particular year with the deaths of a ſubſequent year at ſuch a diſtance from it in the regiſters, as is equal to the difference between the average age of marriage and the average age of death.

There is no abſolutely neceſſary connection between the average age of marriage and the average age of death. In a country the reſources of which will allow of a rapid increaſe of population, the expectation of life, or the average age of death, may be extremely high, and yet the age of marriage be very early, and the marriages then, compared with the contemporary deaths in the regiſters, would, even after the correction for ſecond and third marriages, be very much too great to repreſent the true proportion of the born living to marry. In ſuch a country we might ſuppoſe the average age of death to be 40, and the age of marriage only 20; and in this caſe, which however would be a rare one, the diſtance between marriage and death would be the ſame as between birth and marriage.

If we apply theſe obſervations to regiſters in general, though we ſhall ſeldom be able to obtain accurately the true proportion of the born living to marry, on account of our not knowing the average age of marriage, yet we may draw many uſeful

uſeful inferences from the information which they contain, and reconcile many of the difficulties with which they are accompanied; and it will generally be found, that in thoſe countries where the marriages bear a very large proportion to the deaths, we ſhall ſee reaſon to believe that the age of marriage is much earlier than the average age of death.

In the Ruſſian table for the year 1799, produced by Mr. Tooke, and referred to p. 372, the proportion of marriages to deaths appeared to be as 100 to 200. When corrected for ſecond and third marriages, by ſubtracting one ſixth from the marriages, it will be as 100 to 252. From which it would ſeem to follow, that out of 252 births 200 of them had lived to marry; but we can ſcarcely conceive any country to be ſo healthy, as that 200 out of 252 ſhould live to marry. If however we ſuppoſe what ſeems to be probable, that the age of marriage in Ruſſia is 15 years earlier than the expectation of life or the average age of death, then, in order to find the proportion which lives to marry, we muſt compare the marriages of the preſent year, with the deaths 15 years later. Suppoſing the births to deaths to be (as ſtated p. 372) 183 to 100, and the mortality 1 in 50, the yearly increaſe will be about $\frac{1}{60}$ of the po-

pulation; and conſequently in 15 years the deaths will have increaſed a little above ·28; and the reſult will be, that the marriages compared with the deaths 15 years later, will be as 100 to 322. Out of 322 births it will appear that 200 live to marry, which from the known healthineſs of children in Ruſſia, and the early age of marriage, is not an improbable proportion. The proportion of marriages to births, being as 100 to 385, the prolificknes of marriages, according to the rule laid down, will be as 100 to 411, or each marriage will on an average, including ſecond and third marriages, produce 4·11 births.

The liſts given in the earlier part of the chapter on Ruſſia are probably not correct. It is ſuſpected with reaſon, that there are conſiderable omiſſions both in the births and deaths, but particularly in the deaths, and conſequently the proportion of marriages is given too great. There may alſo be a further reaſon for this large proportion of marriages in Ruſſia. The Empreſs Catherine, in her inſtructions for a new code of laws, notices a cuſtom prevalent among the peaſants, of parents obliging their ſons, while actually children, to marry fullgrown women in order to ſave the expenſe of buying female ſlaves. Theſe women, it is ſaid, generally become the miſtreſſes of the father,

father, and the cuſtom is particularly reprobated by the Empreſs as prejudicial to population. This practice would naturally occaſion a more than uſual number of ſecond and third marriages, and of courſe more than uſually increaſe the proportion of marriages to births in the regiſters.

In the tranſactions of the ſociety at Philadelphia, (vol. iii. No. vii. p. 25) there is a paper by Mr. Barton, entitled *Obſervations on the probability of life in the United States*, in which it appears, that the proportion of marriages to births is as 1 to $4\frac{1}{2}$. He mentions indeed $6\frac{1}{2}$, but his numbers give only $4\frac{1}{2}$. As however this proportion was taken principally from towns, it is probable, that the births are given too low, and I think we may very ſafely take as many as five for the average of towns and country. According to the ſame authority, the mortality is about 1 in 45, and if the population doubles every 25 years, the births would be about 1 in 20. The proportion of marriages to deaths would on theſe ſuppoſitions be as 1 to $2\frac{2}{7}$; and corrected for ſecond and third marriages as 1 to 2·7 nearly. But we cannot ſuppoſe that out of 27 births 20 ſhould live to marry. If however the age of marriage be ten years earlier than the mean age of death, which is highly probable,

probable, we muſt compare the marriages of the preſent year, with the deaths ten years later, in order to obtain the true proportion of the born which lives to marry. According to the progreſs of population here ſtated, the increaſe of the deaths in ten years would be a little above ·3, and the reſult will be, that 200 out of 351, or about 20 out of 35, inſtead of 20 out of 27 will live to marry.[a] The marriages compared with the births 4 years later, according to the rule laid down, will in this caſe give 5·58 for the prolificneſs of marriages. The calculations of Mr. Barton reſpecting the age to which half of the born live cannot poſſibly be applicable to America in general. The regiſters on which they are founded are taken from Philadelphia, and one

[a] If the proportions mentioned by Mr. Barton be juſt, the expectation of life in America is conſiderably leſs than in Ruſſia, which is the reaſon that I have taken only 10 years for the difference between the age of marriage and the age of death, inſtead of 15 years, as in Ruſſia. According to the mode adopted by Dr. Price, (vol. i. p. 272,) of eſtimating the expectation of life in countries the population of which is increaſing, this expectation in Ruſſia would be about 38, (births $\frac{1}{28}$, deaths $\frac{1}{38}$, mean $\frac{1}{31}$), and ſuppoſing the age of marriage to be 23, the difference would be 15.

In America the expectation of life would, upon the ſame principles be only 32½, (births, $\frac{1}{26}$ deaths $\frac{1}{33}$, mean $\frac{1}{29\frac{1}{2}}$), and ſuppoſing the age of marriage 22½, the difference would be 10.

or

or two ſmall towns and villages, which do not appear to be ſo healthy as the moderate towns of Europe, and therefore can form no criterion for the country in general.

In England the average proportion of marriages to births appears of late years to have been about 100 to 350. If we add $\frac{1}{7}$ to the births, inſtead of $\frac{1}{6}$, which in the chapter on *the Checks to Population in England* I conjectured might be nearly the amount of the omiſſions in the births and deaths, this will allow for the circumſtance of illegitimate births; and the marriages will then be to the births as 1 to 4, to the deaths as 1 to 3. Corrected for ſecond and third marriages, the proportion of marriages to deaths will be as 1 to 3·6. Suppoſing the age of marriage in England about 7 years earlier than the mean age of death, the increaſe in theſe 7 years according to the preſent progreſs of population of $\frac{1}{110}$ yearly would be ·06, and the proportion living to marry would be 200 out of 381, or rather more than half.[a] The marriages compared

[a] Births $\frac{1}{30}$, deaths $\frac{1}{40}$, mean $\frac{1}{35}$, and on the ſuppoſition that the age of marriage is 28, the difference would be 7. With regard to the allowance which I have made here and in a former chapter for the omiſſions in the births and deaths, I wiſh to obſerve,

pared with the births 4 years later will give 4·136 for the prolifickneſs of marriages.

Theſe inſtances will be ſufficient to ſhow the mode of applying the rules which have been given, in order to form a judgment, from regiſters, of the prolifickneſs of marriages, and the proportion of the born which lives to marry.

It will be obſerved how very important the correction for ſecond and third marriages is. Suppoſing each marriage to yield 4 births, and the births and deaths to be equal, it would at firſt appear neceſſary that, in order to produce this effect, exactly half of the born ſhould live to marry; but if on account of the ſecond

obſerve, that as I had no very certain and ſatisfactory grounds on which to proceed, it may be incorrect and perhaps too great, though aſſuming this allowance, the mortality appears to be extraordinarily ſmall conſidering the circumſtances of the country. It ſhould be remarked however, that in countries which are different in their rates of increaſe, the annual mortality is a very incorrect criterion of their comparative healthineſs. When an increaſe is going forward the portion of the population which becomes extinct every year is very different from the expectation of life, as has appeared very clearly in the caſes of Ruſſia and America juſt noticed. And as the increaſe of population in England has of late years been more rapid than in France, this circumſtance will undoubtedly contribute in part to the great difference in the annual mortality.

and

and third marriages we ſubtract $\frac{1}{6}$ from the marriages, and then compare them with the deaths, the proportion will be as 1 to $4\frac{4}{5}$, and it will appear that inſtead of one half it will only be neceſſary that 2 children out of $4\frac{4}{5}$ ſhould live to marry. Upon the ſame principle, if the births were to the marriages as 4 to 1, and exactly half of the born lived to marry, it might be ſuppoſed at firſt that the population would be ſtationary, but if we ſubtract $\frac{1}{6}$ from the marriages, and then take the proportion of deaths to marriages as 4 to 1, we ſhall find that the deaths in the regiſters compared with the marriages would only be as $3\frac{1}{3}$ to 1; and the births would be to the deaths as 4 to $3\frac{1}{3}$, or 12 to 10, which is a tolerably faſt rate of increaſe.

It ſhould be further obſerved, that as a much greater number of widowers marry again than of widows, if we wiſh to know the proportion of males which lives to marry, we muſt ſubtract full $\frac{1}{5}$ from the marriages inſtead of $\frac{1}{6}$.[a] Ac-

[a] Of 28473 marriages in Pomerania, 5964 of the men were widowers. Suſſmilch vol. i, tables, p. 98. And according to Buſching of 14759 marriages in Pruſſia and Sileſia, 3071 of the men were widowers. Suſſmilch, vol. iii, tables, p. 95. Muret calculates that 100 men generally marry 110 women. Memoires par la Société économique de Berne. Année 1766, premiere partie page 30.

cording

cording to this correction, if each marriage yielded 4 births, it would only be neceſſary that two male children out of 5 ſhould live to marry in order to keep up the population; and if each marriage yielded 5 births, leſs than one third would be neceſſary for this purpoſe; and ſo for the other calculations. In eſtimating the proportion of males living to marry, ſome allowance ought alſo to be made for the greater proportion of male births.

Three cauſes appear to operate in producing an exceſs of the births above the deaths, 1. the prolifickneſs of marriages; 2. the proportion of the born which lives to marry, and 3. the earlineſs of theſe marriages compared with the expectation of life, or the ſhortneſs of a generation by marriage and birth, compared with the paſſing away of a generation by death. This latter cauſe Dr. Price ſeems to have omitted to conſider. For though he very juſtly ſays, that the rate of increaſe, ſuppoſing the prolific powers the ſame, depends upon the encouragement to marriage and the expectation of a child juſt born; yet in explaining himſelf, he ſeems to conſider an increaſe in the expectation of life, merely as it affects the increaſe of the number of perſons who reach maturity and marry, and not

not as it affects, beſides, the diſtance between the age of marriage and the age of death. But it is evident, that if there be any principle of increaſe, that is, if one marriage in the preſent generation yields more than one in the next, including ſecond and third marriages, the quicker theſe generations are repeated, compared with the paſſing away of a generation by death, the more rapid will be the increaſe.

A favourable change in either of theſe three cauſes, the other two remaining the ſame, will clearly produce an effect upon population, and occaſion a greater exceſs of the births above the deaths in the regiſters. With regard to the two firſt cauſes, though an increaſe in either of them will produce the ſame kind of effect on the proportion of births to deaths, yet their effects on the proportion of marriages to births will be in oppoſite directions. The greater is the prolificknes of marriages, the greater will be the proportion of births to marriages, and the greater is the number of the born which lives to be married, the leſs will be the proportion of births to marriages.[a] Conſequently,

[a] Dr. Price himſelf has inſiſted ſtrongly upon this, (vol. i. p. 270, 4th edit.) and yet he ſays, (p. 275) that healthfulneſs and prolificknes are probably cauſes of increaſe ſeldom ſeparated,

Conſequently, if within certain limits, the prolifickneſs of marriages and the number of the born living to marry increaſe at the ſame time, the proportion of births to marriages in the regiſters may ſtill remain unaltered. And this is the reaſon why the regiſters of different countries with reſpect to births and marriages are often found the ſame under very different rates of increaſe.

ſeparated, and refers to regiſters of births and weddings as a proof of it. But though theſe cauſes may undoubtedly exiſt together, yet if Dr. Price's reaſoning be juſt, ſuch coexiſtence cannot poſſibly be inferred from the liſts of births and weddings. Indeed the two countries, Sweden and France, to the regiſters of which he refers as ſhowing the prolifickneſs of their marriages, are known to be by no means remarkably healthy; and the regiſters of towns to which he alludes, though they may ſhow as he intends, a want of prolifickneſs, yet according to his previous reaſoning, ſhow at the ſame time great healthineſs, and therefore ought not to be produced as a proof of the abſence of both. The general fact that Dr. Price wiſhes to eſtabliſh may ſtill remain true, that country ſituations are both more healthy and more prolific than towns: but this fact certainly cannot be inferred merely from liſts of births and marriages. With regard to the different countries of Europe, it will generally be found, that thoſe are the moſt healthy which are the leaſt prolific, and thoſe the moſt prolific which are the leaſt healthy. The earlier age of marriage in unhealthy countries is the obvious reaſon of this fact.

The

The proportion of births to marriages, indeed, forms no criterion whatever, by which to judge of the rate of increaſe. The population of a country may be ſtationary or declining with proportion as 5 to 1, and may be increaſing with ſome rapidity with a proportion as 4 to 1. But given the rate of increaſe, which may be obtained from other ſources, it is clearly deſirable, to find in the regiſters a ſmall rather than a large proportion of births to marriages; becauſe the ſmaller this proportion is the greater muſt be the proportion of the born which lives to marry, and of courſe the more healthy muſt be the country.

Crome[a] obſerves, that, when the marriages of a country yield leſs than 4 births, the population is in a very precarious ſtate, and he eſtimates the prolifickneſs of marriages by the proportion of yearly births to marriages. If this obſervation were juſt, the population of many countries of Europe would be in a precarious ſtate, as in many countries the proportion of births to marriages in the regiſters is rather below than above 4 to 1. It has been ſhown in what manner this proportion in the regiſters ſhould be corrected, in order to make it a juſt

[a] Ueber die Bevolkerung der Europais. Staat. p. 91.

repreſentation of the prolifickneſs of marriages; and if a large part of the born live to marry, and the age of marriage be conſiderably earlier than the expectation of life, ſuch a proportion in the regiſters is by no means inconſiſtent with a rapid increaſe. In Ruſſia it has appeared, that the proportion of births to marriages is leſs than 4 to 1; and yet its population increaſes faſter than that of any other nation in Europe. In England the population increaſes more rapidly than in France; and yet in England the proportion of births to marriages, when allowance has been made for omiſſions, is about 4 to 1, in France $4\frac{1}{7}$ to 1. To occaſion ſo rapid a progreſs as that which has taken place in America, it will indeed be neceſſary, that all the cauſes of increaſe ſhould be called into action; and if the prolifickneſs of marriages be very great, the proportion of births to marriages will certainly be above 4 to 1: but in all ordinary caſes, where the whole power of procreation has not room to expand itſelf, it is ſurely better, that the actual increaſe ſhould ariſe from that degree of healthineſs in the early ſtages of life, which cauſes a great proportion of the born to live to maturity and to marry, than from a great degree of prolifickneſs accompanied by a great

great mortality. And conſequently in all ordinary caſes, a proportion of births to marriages as 4 or leſs than 4 to 1 cannot be conſidered as an unfavourable ſign.

It ſhould be obſerved, that it does not follow, that the marriages of a country are early, or that the preventive check to population does not prevail, becauſe the greater part of the born lives to marry. In ſuch countries as Norway and Switzerland, where half of the born live to above 40, it is evident, that, though rather more than half live to marry, a large portion of the people between the ages of 20 and 40 would be living in an unmarried ſtate, and the preventive check would appear to prevail to a great degree. In England it is probable, that half of the born live to above 35; and though rather more than half live to marry, the preventive check might prevail conſiderably (as we know it does), though not to the ſame extent as in Norway and Switzerland.

The preventive check is perhaps beſt meaſured by the ſmallneſs of the proportion of yearly births to the whole population. The proportion of yearly marriages to the population is only a juſt criterion in countries ſimilarly circumſtanced, but is incorrect, where there is a difference

in the prolifickneſs of marriages, or in the proportion of the population under the age of puberty, and in the rate of increaſe. If all the marriages of a country, be they few or many, take place young, and be conſequently prolific, it is evident, that to produce the ſame proportion of births, a ſmaller proportion of marriages will be neceſſary; or with the ſame proportion of marriages a greater proportion of births will be produced. This latter caſe ſeems to be applicable to France, where both the births and deaths are greater than in Sweden, though the proportion of marriages is nearly the ſame, or rather leſs. And when in two countries compared one of them has a much greater part of its population under the age of puberty than the other, it is evident, that any general proportion of the yearly marriages to the whole population will not imply the ſame operation of the preventive check among thoſe of a marriageable age.

It is in part the ſmall proportion of the population under the age of puberty, as well as the influx of ſtrangers, that occaſions in towns a greater proportion of marriages than in the country, although there can be little doubt, that the preventive check prevails moſt in towns. The converſe of this will alſo be true; and conſequently in ſuch a country as America, where half

half of the population is under ſixteen, the proportion of yearly marriages will not accurately expreſs how little the preventive check really operates.

But on the ſuppoſition of nearly the ſame natural prolifickneſs in the women of moſt countries, the ſmallneſs of the proportion of births will generally indicate, with tolerable exactneſs, the degree in which the preventive check prevails, whether ariſing principally from late, and conſequently unprolific marriages, or from a large proportion of the population above the age of puberty dying unmarried.

That the reader may ſee at once the rate of increaſe, and the period of doubling, which would reſult from any obſerved proportion of births to deaths, and of theſe to the whole population, I ſubjoin two tables from Suſſmilch, calculated by Euler, which I believe are very correct. The firſt is confined to the ſuppoſition of a mortality of 1 in 36, and therefore can only be applied to countries where ſuch a mortality is known to take place. The other is general, depending ſolely upon the proportion which the exceſs of the births above the burials bears to the whole population, and therefore may be applied univerſally to all countries, whatever may be the degree of their mortality.

It will be obſerved, that, when the proportion between the births and burials is given, the period of doubling will be ſhorter, the greater the mortality; becauſe the births as well as deaths are increaſed by this ſuppoſition, and they both bear a greater proportion to the whole population than if the mortality were ſmaller, and there were a greater number of people in advanced life.

The mortality of Ruſſia, according to Mr. Tooke, is 1 in 58, and the proportion of births 1 in 26. Allowing for the omiſſions in the burials, if we aſſume the mortality to be 1 in 52, then the births will be to the deaths as 2 to 1, and the proportion which the exceſs of births bears to the whole population will be $\frac{1}{52}$.[a] According to Table II, the period of doubling will, in this caſe, be about 36 years. But if we were to keep the proportion of births to deaths as 2 to 1, and ſuppoſe a mortality of 1 in 36, as in Table I, the exceſs of births above the burials would be $\frac{1}{36}$ of the whole population, and the period of doubling would be only 25 years.

[a] The proportions here mentioned are different from thoſe which have been taken from the additional table in Mr. Tooke's ſecond edition; but they are aſſumed here as more eaſily and clearly illuſtrating the ſubject.

TABLE

TABLE I.

When in any country there are 103,000 perſons living, and the mortality is 1 in 36.

If the proportion of deaths to births be as	Then the exceſs of the births will be	The proportion of the exceſs of the births to the whole population will be	And therefore the period of doubling will be
11	277	$\frac{4}{360}$	250 years.
12	555	$\frac{1}{180}$	125
13	833	$\frac{1}{120}$	$83\frac{1}{2}$
14	1110	$\frac{1}{90}$	$62\frac{1}{4}$
15	1388	$\frac{1}{72}$	$50\frac{1}{4}$
16	1666	$\frac{1}{60}$	42
1Q : 17	1948	$\frac{1}{51}$	$35\frac{3}{4}$
18	2221	$\frac{1}{45}$	$31\frac{1}{2}$
19	2499	$\frac{1}{40}$	28
20	2777	$\frac{1}{36}$	$25\frac{1}{10}$
22	3332	$\frac{1}{30}$	$21\frac{1}{2}$
25	4165	$\frac{1}{24}$	17
30	5554	$\frac{1}{18}$	$12\frac{1}{2}$

TABLE II.

The proportion of the exceſs of births above the deaths, to the whole of the living.	Periods of doubling in years and ten thouſandth parts	The proportion of the exceſs of births above the deaths, to the whole of the living.	Periods of doubling in years and ten thouſandth parts.
10	7.2722	21	14.9000
11	7.9659	22	15.5932
12	8.6595	23	16.2864
13	9.3530	24	16.9797
14	10.0465	25	17.6729
1 : 15	10.7400	1 : 26	18.3662
16	11.4333	27	19.0594
17	12.1266	28	19.7527
18	12.8200	29	20.4458
19	13.5133	30	21.1391
20	14.2066		

TABLE II. *continued.*

The proportion of the excess of births above the deaths, to the whole of the living.	Periods of doubling in years and ten thousandth parts.	The proportion of the excess of births above the deaths, to the whole of the living.	Periods of doubling in years and ten thousandth parts.
1 : 32	22.5255	1 : 210	145.9072
1 : 34	23.9119	1 : 220	152.8387
1 : 36	25.2983	1 : 230	159.7702
1 : 38	26.6847	1 : 240	166.7017
1 : 40	28.0711	1 : 250	173.6332
1 : 42	29.4574	1 : 260	180.5647
1 : 44	30.8438	1 : 270	187.4961
1 : 46	32.2302	1 : 280	194.4275
1 : 48	33.6165	1 : 290	201.3590
1 : 50	35.0029	1 : 300	208.2905
1 : 55	38.4687	1 : 310	215.2220
1 : 60	41.9345	1 : 320	222.1535
1 : 65	45.4003	1 : 330	229.0850
1 : 70	48.8661	1 : 340	236.0164
1 : 75	52.3318	1 : 350	242.9479
1 : 80	55.7977	1 : 360	249.8794
1 : 85	59.2634	1 : 370	256.8109
1 : 90	62.7292	1 : 380	263.7425
1 : 95	66.1950	1 : 390	270.6740
1 : 100	69.6607	1 : 400	277.6055
1 : 110	76.5923	1 : 410	284.5370
1 : 120	83.5230	1 : 420	291.4685
1 : 130	90.4554	1 : 430	298.4000
1 : 140	97.3868	1 : 440	305.3314
1 : 150	104.3183	1 : 450	312.2629
1 : 160	111.2598	1 : 460	319 1943
1 : 170	118.1813	1 : 470	326.1258
1 : 180	125.1128	1 : 480	333.0573
1 : 190	132.0443	1 : 490	339.9888
1 : 200	138 9757	1 : 500	346.9202
		1 : 1000	693.40.

CHAP.

CHAP. X.

Effects of Epidemics on Regiſters of Births, Deaths, and Marriages.

It appears clearly from the very valuable tables of mortality, which Suſſmilch has collected, and which include periods of 50 or 60 years, that all the countries of Europe are ſubject to periodical ſickly ſeaſons, which check their increaſe; and very few are exempt from thoſe great and waſting plagues, which, once or twice perhaps in a century, ſweep off the third or fourth part of their inhabitants. The way in which theſe periods of mortality affect all the general proportions of births, deaths, and marriages, is ſtrikingly illuſtrated in the tables for Pruſſia and Lithuania, from the year 1692 to the year 1757.[a]

[a] Suſſmilch, Gottliche Ordnung, vol. i, table xxi, p. 83, of the tables.

TABLE III.

Annual Average.	Marriages.	Births.	Deaths.	Proportion of marriages to births.	Proportion of deaths to births.
5 yrs to 1697	5747	19715	14862	10 : 34	100 : 132
5 yrs — 1702	6070	24112	14474	10 : 39	100 : 165
6 yrs — 1708	6082	26896	16430	10 : 44	100 : 163
In 1709 & 1710	a plague	number destroyed in 2 years.	247733		
In 1711	12028	32522	10131	10 : 27	100 : 320
In 1712	6267	22970	10445	10 : 36	100 : 220
5 yrs to 1716	4968	21603	11984	10 : 43	100 : 180
5 yrs — 1721	4324	21396	12039	10 : 49	100 : 177
5 yrs — 1726	4719	21452	12863	10 : 45	100 : 166
5 yrs — 1731	4808	29554	12825	10 : 42	100 : 160
4 yrs — 1735	5424	22692	15475	10 : 41	100 : 146
In 1736	5280	21659	26371	Epidemic	
In 1737	5765	18930	24480	years.	
5 yrs to 1742	5582	22099	15255	10 : 39	100 : 144
4 yrs — 1746	5469	25275	15117	10 : 46	100 : 167
5 yrs — 1751	6423	28235	17272	10 : 43	100 : 163
5 yrs — 1756	5599	28392	19154	10 : 50	100 : 148
In the 16 yrs before the plague	95585	380516	245763	10 : 39	100 : 154
In 46 yrs after the plague	248777	1083872	690324	10 : 43	100 : 157
In 62 good yrs	344361	1464388 936087	936087	10 : 43	100 : 156
More born than died		528301			
In the 2 plague years	5477	23977	247733		
In all the 64 years including the plague	340838	1488365 1183820	1183820	10 : 42	100 : 125
More born *than* died		304745			

The table, from which this is copied, contains the marriages, births and deaths, for every particular year during the whole period; but to bring it into a ſmaller compaſs, I have retained only the general average drawn from the ſhorter periods of five and four years, except where the numbers for the individual years preſented any fact worthy of particular obſervation. The year 1711, immediately ſucceeding the great plague, is not included by Suſſmilch in any general average; but he has given the particular numbers, and if they be accurate they ſhow the very ſudden and prodigious effect of a great mortality on the number of marriages.

Suſſmilch calculates, that above one third of the people was deſtroyed by the plague; and yet, notwithſtanding this great diminution of the population, it will appear by a reference to the table, that the number of marriages in the year 1711 was very nearly double the average of the ſix years preceding the plague.[a] To produce

[a] The number of people before the plague, according to Suſſmilch's calculations, (vol. i, ch. ix, ſect. 173.) was 570,000, from which if we ſubtract 247,733, the number dying in the plague, the remainder, 322,267, will be the population after the plague; which, divided by the number of marriages and the number of births for the year 1711, makes the marriages about one twenty-ſixth part of the population, and the births

duce this effect we may ſuppoſe, that almoſt all who were at the age of puberty were induced, from the demand for labour, and the number of vacant employments, immediately to marry. This immenſe number of marriages in the year could not poſſibly be accompanied by a great proportional number of births, becauſe we cannot ſuppoſe, that the new marriages could each yield more than one birth in the year, and the reſt muſt come from the marriages which had continued unbroken through the plague. We cannot therefore be ſurpriſed, that the proportion of births to marriages in this year ſhould be only 2·7 to 1, or 27 to 10. But though the proportion of births to marriages could not be great; yet on account of the extraordinary number of marriages, the abſolute number of births muſt be great; and as the number of deaths would naturally be ſmall, the proportion of births to deaths is prodigious, being 320 to

births about one tenth part. Such extraordinary proportions could only occur in any country, in an individual year. If they were to continue, they would double the population in leſs than ten years. It is poſſible, that there may be a miſtake in the table, and that the births and marriages of the plague years are included in the year 1711; though as the deaths are carefully ſeparated, it ſeems very ſtrange that it ſhould be ſo. It is however a matter of no great importance. The other years are ſufficient to illuſtrate the general principle.

100;

100; an exceſs of births as great, perhaps, as has ever been known in America.

In the next year, 1712, the number of marriages muſt of courſe diminiſh exceedingly; becauſe, nearly all who were at the age of puberty having married the year before, the marriages of this year would be ſupplied principally by thoſe who had arrived at this age, ſubſequent to the plague. Still however, as all who were marriageable had not probably married the year before, the number of marriages in the year 1712 is great in proportion to the population; and though not much more than half of the number which took place during the preceding year, is greater than the average number in the laſt period before the plague. The proportion of births to marriages in 1712, though greater than in the preceding year on account of the ſmaller comparative number of marriages, is, with reference to other countries, not great, being, as 36 to 1, or 36 to 10. But the proportion of births to deaths, though leſs than in the preceding year, when ſo very large a proportion of the people married, is, with reference to other countries, ſtill unuſually great, being as 220 to 100; an exceſs of births, which, calculated on a mortality of 1 in 36, would double the population of a country (according to Table I, page 535) in 21 $\frac{1}{8}$ years.

From

From this period the number of annual marriages begins to be regulated by the diminiſhed population, and of courſe to ſink conſiderably below the average number of marriages before the plague, depending principally on the number of perſons riſing annually to a marriageable ſtate. In the year 1720, about nine or ten years after the plague, the number of annual marriages, either from accident, or the beginning operation of the preventive check, is the ſmalleſt; and it is at this time that the proportion of births to marriages riſes very high. In the period from 1717 to 1721 the proportion, as appears by the table, is 49 to 10; and in the particular years 1719 and 1720, it is 50 to 10 and 55 to 10.

Suſſmilch draws the attention of his readers to the fruitfulneſs of marriages in Pruſſia after the plague, and mentions the proportion of 50 annual births to 10 annual marriages as a proof of it. There are the beſt reaſons from the general average for ſuppoſing, that the marriages in Pruſſia at this time were very fruitful; but certainly the proportion of this individual year, or even period, is not a ſufficient proof of it, being evidently cauſed by a ſmaller number of marriages taking place in the year, and not by a greater

greater number of births.[a] In the two years immediately ſucceeding the plague, when the exceſs of births above the deaths was ſo aſtoniſhing, the births bore a ſmall proportion to the marriages; and according to the uſual mode of calculating it would have followed, that each marriage yielded only 2·7 or 3·6 children. In the laſt period of the table, from 1752 to 1756, the births are to the marriages as 5 to 1, and in the individual year 1756, as, 6·1 to 1: and yet during this period the births are to the deaths only as 148 to 100, which could not have been the caſe, if the high proportion of births to marriages had indicated a much greater number of births than uſual, inſtead of a ſmaller number of marriages.

The variations in the proportion of births to deaths, in the different periods of the 64 years included in the table, deſerve particular attention. If we were to take an average of the four years immediately ſucceeding the plague, the births would be to the deaths in the proportion of above 22 to 10, which, ſuppoſing the mortality to be 1 in 36, would double the population in leſs than 21 years. If we take the 20 years from 1711 to 1731, the average propor-

[a] Suſſmilch, Gottliche Ordnung, vol. i, c. v, ſ. lxxxvi, p. 175.

tion

tion of the births to deaths will appear to be about 17 to 10, a proportion which (according to Table I. page 535) would double the population in about 35 years. But if instead of 20 years we were to take the whole period of 64 years, the average proportion of births to deaths turns out to be but a little more than 12 to 10, a proportion which would not double the population in less than 125 years. If we were to include the mortality of the plague, or even of the epidemic years 1736 and 1737, in too short a period, the deaths might exceed the births, and the population would appear to be decreasing.

Sussmilch thinks, that, instead of 1 in 36, the mortality in Prussia after the plague might be 1 in 38; and it may appear perhaps to some of my readers, that the plenty occasioned by such an event ought to make a still greater difference. Dr. Short has particularly remarked, that an extraordinary healthiness generally succeeds any very great mortality;[a] and I have no doubt, that the observation is just comparing similar ages together. But under the most favourable circumstances, infants under three years are more subject to death than at other ages; and the extraordinary proportion of children, which

[a] History of air, seasons, &c. vol ii, p. 344.

usually

uſually follows a very great mortality, counterbalances at firſt the natural healthineſs of the period, and prevents it from making much difference in the general mortality.

If we divide the population of Pruſſia after the plague by the number of deaths in the year 1711, it will appear, that the mortality was nearly 1 in 31, and was therefore increaſed rather than diminiſhed, owing to the prodigious number of children born in that year. But this greater mortality would certainly ceaſe, as ſoon as theſe children began to riſe into the firmer ſtages of life; and then probably Suſſmilch's obſervations would be juſt. In general however, we ſhall obſerve, that a great previous mortality produces a more ſenſible effect on the births than on the deaths. By referring to the table it will appear, that the number of annual deaths regularly increaſes with the increaſing population, and nearly keeps up the ſame relative proportion all the way through. But the number of annual births is not very different during the whole period, though in this time the population had more than doubled itſelf; and therefore the *proportion* of births to the whole population, at firſt, and at laſt, muſt have changed in an extraordinary degree.

It will appear therefore how liable we ſhould be to err in aſſuming a given proportion of births, for the purpoſe of eſtimating the paſt population of any country. In the preſent inſtance it would have led to the concluſion, that the population was ſcarcely diminiſhed by the plague, although from the number of deaths it was known to be diminiſhed one third.

Variations of the ſame kind, though not in the ſame degree, appear in the proportions of births, deaths, and marriages, in all the tables whsch Suſſmilch has collected; and as writers on theſe ſubjects have been too apt to form calculations for paſt and future times from the proportions of a few years, it may be uſeful to draw the attention of the reader to a few more inſtances of ſuch variations.

In the churmark of Brandenburgh,[a] during 15 years ending with 1712, the proportion of births to deaths was nearly 17 to 10. For 6 years ending with 1718, the proportion ſunk to 13 to 10; for 4 years ending with 1752, it was only 11 to 10; and for 4 years ending with 1756, 12 to 10. For 3 years ending with 1759, the deaths very greatly exceeded the births. The proportion of the births to the whole population is not given; but it is not probable,

[a] Suſſmilch's Göttliche Ordnung, vol. i, Tables, p. 88.

that

that the great variations obſervable in the proportion of births to deaths ſhould have ariſen ſolely from the variations in the deaths. The proportion of births to marriages is tolerably uniform, the extremes being only 38 to 10, and 35 to 10, and the mean about 37 to 10. In this table no very great epidemics occur till the 3 years beginning with 1757, and beyond this period the liſts are not continued.

In the dukedom of Pomerania,[a] the average proportion of births to deaths for 60 years from 1694 to 1756 both included, was 138 to100; but in ſome of the periods of ſix years it was as high as 177 to 100, and 155 to 100. In others it ſunk as low as 124 to 100, and 130 to 100. The extremes of the proportions of births to marriages in the different periods of 5 and 6 years were 36 to 10, and 43 to 10, and the mean of the 60 years about 38 to 10. Epidemic years appear to have occurred occaſionally, in three of which the deaths exceeded the births; but this temporary diminution of population produced no correſponding diminution of births; and the two individual years which contain the greateſt proportion of marriages in the whole table occur, one in the year after, and the other two years after epidemics.

[a] Suſſmilch, vol. i, tables, p. 91.

The excess of deaths however was not great till the 3 years ending with 1759, with which the table concludes.

In the neumark of Bradenburgh,[a] for 60 years from 1695 to 1756 both included, the average proportion of births to deaths in the first 30 years was 148 to 100, in the last 30 years 127 to 100, in the whole 60 years 136 to 100. In some periods of 5 years it was as high as 171 and 167 to 100. In others as low as 118 and 128 to 100. For 5 years ending with 1726, the yearly average of births was 7012; for 5 years ending with 1746, it was 6927, from which, judging by the births, we might infer, that the population had decreased in this interval of 20 years; but it appears from the average proportion of births and deaths during this period, that it must have considerably increased, notwithstanding the intervention of some epidemic years. The proportion of births to the whole population must therefore have decidedly changed. Another interval of 20 years in the same tables gives a similar result, both with regard to the births and the marriages. The extremes of the proportion of births to marriages are 34 to 10, and 42 to 10, and the mean about 38 to 10. The 3 years

[a] Sussmilch's Gottliche Ordnung, vol. i, tables, p. 99.

beginning

beginning with 1757 were, as in the other tables, very fatal years.

In the dukedom of Magdeburgh[a] during 64 years ending with 1756, the average proportion of births to deaths was 123 to 100; in the firſt 28 years of the period 142 to 100, and in the laſt 34 years only 112 to 100; during one period of 5 years it was as high as 170 to 100, and in two periods the deaths exceeded the births. Slight epidemics appear to be interſperſed rather thickly throughout the table. In the two inſtances where three or four occur in ſucceſſive years, and diminiſh the population, they are followed by an increaſe of marriages and births. The extremes of the proportions of births to marriages are 42 to 10, and 34 to 10, and the mean of the 64 years 39 to 10. On this table Suſſmilch remarks, that, though the average number of deaths ſhows an increaſed population of one third from 1715 or 1720, yet the births and marriages would prove it to be ſtationary, or even declining. In drawing this concluſion however, he adds the three epidemic years ending with 1759, during which both the marriages and births ſeem to have diminiſhed.

[a] Suſſmilch, vol. i, tables, p. 103.

In the principality of Halberſtadt,* the average proportion of births to deaths for 68 years, ending with 1756, was 124 to 100; but in ſome periods of 5 years it was as high as 160 to 100, and in others as low as 110 to 100. The increaſe in the whole 68 years was conſiderable, and yet for 5 years ending with 1723, the average number of births was 2818, and for 4 years ending with 1750, 2628, from which it would appear, that the population in 27 years had conſiderably diminiſhed. A ſimilar appearance occurs with regard to the marriages, during a period of 32 years. In the 5 years ending with 1718, they were 727; in the 5 years ending with 1750, 689. During both theſe periods the proportion of deaths would have ſhown a conſiderable increaſe. Epidemics ſeem to have occurred frequently, and in almoſt all the inſtances in which they were ſuch as for the deaths to exceed the births, they were immediately ſucceeded by a more than uſual proportion of marriages, and in a few years by an increaſed proportion of births. The greateſt number of marriages in the whole table occurs in the year 1751, after an epidemic in the year 1750, in

* Suſſmilch, vol. i. Tables, p, 108.

which

which the deaths had exceeded the births above one third, and the four or five following years contain the largeſt proportion of births. The extremes of the proportions of births to marriages are 42 to 10, and 34 to 10, the mean of the 68 years 38 to 10.

The remaining tables contain ſimilar reſults, but theſe will be ſufficient to ſhow the variations, which are continually occurring in the proportions of the births and marriages as well as of the deaths, to the whole population.

It will be obſerved, that the leaſt variable of the proportions is that which the births and marriages bear to each other; and the obvious reaſon is, that this proportion is principally influenced by the prolifickneſs of marriages, which will not of courſe be ſubject to great changes. We can hardly indeed ſuppoſe, that the prolifickneſs of marriages ſhould vary ſo much as the different proportions of births to marriages in the tables. Nor is it neceſſary that it ſhould, as another cauſe will contribute to produce the ſame effect. The births which are contemporary with the marriages of any particular year belong principally to marriages which had taken place ſome years before; and therefore, if for four or five years a large

proportion of marriages were to take place, and then accidentally for one or two years a ſmall proportion, the effect would be a large proportion of births to marriages in the regiſters during theſe one or two years; and on the contrary, if for four or five years few marriages comparatively were to take place, and then for one or two years a great number, the effect would be a ſmall proportion of births to marriages in the regiſters. This was ſtrikingly illuſtrated in the table for Pruſſia and Lithuania, and would be confirmed by an inſpection of all the other tables collected by Suſſmilch; in which it appears, that the extreme proportions of births to marriages are generally more affected by the number of marriages than the number of births, and conſequently ariſe more from the variations in the diſpoſition or encouragement to matrimony, than from the variations in the prolificknes of marriages.

The common epidemical years, that are interſperſed throughout theſe tables, will not of courſe have the ſame effects on the marriages and births, as the great plague in the table for Pruſſia; but in proportion to their magnitude, their operation will in general be found to be ſimilar.

ſimilar. From the regiſters of many other countries, and particularly of towns, it appears, that the viſitations of the plague were frequent at the latter end of the 17th and the beginning of the 18th centuries.

In contemplating the plagues and ſickly ſeaſons which occur in theſe tables, after a period of rapid increaſe, it is impoſſible not to be impreſſed with the idea, that the number of inhabitants had, in theſe inſtances, exceeded the food and the accommodations neceſſary to preſerve them in health. The maſs of the people would, upon this ſuppoſition, be obliged to live worſe, and a greater number of them would be crowded together in one houſe; and theſe natural cauſes would evidently contribute to produce ſickneſs, even though the country, abſolutely conſidered, might not be crowded and populous. In a country, even thinly inhabited, if an increaſe of population take place before more food is raiſed, and more houſes are built, the inhabitants muſt be diſtreſſed for room and ſubſiſtence. If in the Highlands of Scotland, for the next ten or twelve years, the marriages were to be either more frequent or more prolific, and no emigration were to take place, inſtead

inſtead of five to a cottage, there might be ſeven, and this, added to the neceſſity of worſe living, would evidently have a moſt unfavourable effect on the health of the common people.

CHAP.

CHAP. XI.

General deductions from the preceding view of Society.

THAT the checks which have been mentioned are the immediate cauſes of the ſlow increaſe of population, and that theſe checks reſult principally from an inſufficiency of ſubſiſtence, will be evident from the comparatively rapid increaſe, which has invariably taken place, whenever, by ſome ſudden enlargement in the means of ſubſiſtence, theſe checks have been in any conſiderable degree removed.

It has been univerſally remarked, that all new colonies ſettled in healthy countries, where room and food were abundant, have conſtantly made a rapid progreſs in population. Many of the colonies from ancient Greece, in the courſe of one or two centuries, appear to have rivalled, and even ſurpaſſed, their mother cities. Syracuſe and Agrigentum in Sicily; Tarentum and Locri in Italy; Epheſus and Miletus in Leſſer Aſia; were, by all accounts, at leaſt equal to any of the cities of ancient Greece. All

theſe

theſe colonies had eſtabliſhed themſelves in countries inhabited by ſavage and barbarous nations, which eaſily gave place to the new ſettlers, who had of courſe plenty of good land. It is calculated, that the Iſraelites, though they increaſed very ſlowly, while they were wandering in the land of Canaan, on ſettling in a fertile diſtrict of Egypt doubled their numbers every fifteen years during the whole period of their ſtay.* But not to dwell on remote inſtances, the European ſettlements in America bear ample teſtimony to the truth of a remark, that has never I believe been doubted. Plenty of rich land to be had for little or nothing is ſo powerful a cauſe of population, as generally to overcome all obſtacles.

No ſettlements could eaſily have been worſe managed than thoſe of Spain in Mexico, Peru, and Quito. The tyranny, ſuperſtition, and vices of the mother country were introduced in ample quantities among her children. Exorbitant taxes were exacted by the crown; the moſt arbitrary reſtrictions were impoſed on their trade; and the governors were not behind hand in rapacity and extortion for themſelves as well as their

* Short's New Obſerv. on Bills of Mortality, p. 259, 8vo. 1750.

maſter.

maſter. Yet under all theſe difficulties, the colonies made a quick progreſs in population. The city of Quito, which was but a hamlet of Indians, is repreſented by Ulloa as containing fifty or ſixty thouſand inhabitants above fifty years ago.[a] Lima, which was founded ſince the conqueſt, is mentioned by the ſame author as equally or more populous, before the fatal earthquake in 1746. Mexico is ſaid to contain a hundred thouſand inhabitants, which, notwithſtanding the exaggerations of the Spaniſh writers, is ſuppoſed to be five times greater than what it contained in the time of Montezuma.[b]

In the Portugueſe colony of Brazil, governed with almoſt equal tyranny, there were ſuppoſed to be above thirty years ago ſix hundred thouſand inhabitants of European extraction.[c]

The Dutch and French colonies, though under the government of excluſive companies of merchants, ſtill perſiſted in thriving under every diſadvantage.[d]

But the Engliſh North American colonies, now the powerful people of the United States of

[a] Voy. d'Ulloa, tom, i. liv. v, ch. v, p. 229, 4to. 1752.
[b] Smith's Wealth of Nations, vol. ii, b. iv, ch. viii, p. 363.
[c] Id. p. 365. [d] Id. p.368, 369.

America,

America, far outſtripped all the others, in the progreſs of their population. To the quantity of rich land which they poſſeſſed in common with the Spaniſh and Portugueſe colonies, they added a greater degree of liberty and equality. Though not without ſome reſtrictions on their foreign commerce, they were allowed the liberty of managing their own internal affairs. The political inſtitutions which prevailed were favourable to the alienation and diviſion of property. Lands which were not cultivated by the proprietor within a limited time were declared grantable to any other perſon. In Pennſylvania, there was no right of primogeniture; and in the provinces of New England, the eldeſt ſon had only a double ſhare. There were no tithes in any of the States, and ſcarcely any taxes. And on account of the extreme cheapneſs of good land, a capital could not be more advantageouſly employed than in agriculture, which, at the ſame time that it affords the greateſt quantity of healthy work, ſupplies the moſt valuable produce to the ſociety.

The conſequence of theſe favourable circumſtances united was a rapidity of increaſe almoſt without parallel in hiſtory. Throughout all the northern provinces the population was found

to

to double itſelf in 25 years. The original number of perſons, which had ſettled in the four provinces of New England in 1643, was 21,200. Afterwards it was calculated, that more left them than went to them. In the year 1760 they were increaſed to half a million. They had therefore, all along, doubled their number in 25 years. In New Jerſey, the period of doubling appeared to be 22 years, and in Rhode Iſland ſtill leſs. In the back ſettlements, where the inhabitants applied themſelves ſolely to agriculture, and luxury was not known, they were ſuppoſed to double their number in fifteen years. Along the ſeacoaſt, which would naturally be firſt inhabited, the period of doubling was about 35 years, and in ſome of the maritime towns the population was abſolutely at a ſtand.[a] From the

[a] Price's Obſerv. on Reverſ. Paym. vol. i, p. 282, 283, and vol. ii, p. 260. I have lately had an opportunity of ſeeing ſome extracts from the ſermon of Dr. Styles, from which Dr. Price has taken theſe facts. Speaking of Rhode Iſland, Dr. Styles ſays, that though the period of doubling for the whole colony is 25 years, yet that it is different in different parts, and within land is 20 and 15 years. The population of the five towns of Glouceſter, Situate, Coventry, Weſtgreenwich, and Exeter, was 5033, A. D 1748, and 6986, A. D. 1755; which implies a period of doubling of 15 years only. He mentions

the late cenſus made in America it appears, that, taking all the States together, they have ſtill continued to double their numbers every 25 years; and as the whole population is now ſo great as not to be materially affected by the emigrations from Europe, and as it is known, that in ſome of the towns and diſtricts near the

afterwards, that the county of Kent doubles in 20 years; and the county of Providence in 18 years.

I have alſo lately ſeen a paper of *facts and calculations reſpecting the population of the United States*, which makes the period of doubling for the whole of the States, ſince their firſt ſettlement, only 20 years. I know not of what authority this paper is; but far as it goes upon public facts and enumerations I ſhould think, that it muſt be to be depended on. One period is very ſtriking. From a return to Congreſs in 1782, the population appeared to be 2,389,300, and in the cenſus of 1790, 4,000,000: increaſe in 9 years, 1,610,700; from which deduct ten thouſand per annum for European ſettlers, which will be 90,000; and allow for their increaſe at 5 per cent for 4½ years, which will be 20,250: the remaining increaſe during thoſe 9 years, from procreation only, will be 1,500,450 which is very nearly 7 per cent; and conſequently the period of doubling at this rate would be leſs than 16 years.

If this calculation for the whole population of the States be in any degree near the truth, it cannot be doubted, that in particular diſtricts the period of doubling from procreation only has often been leſs than 15 years. The period immediately ſucceeding the war was likely to be a period of very rapid increaſe.

ſea-

ſeacoaſt, the progreſs of population has been comparatively ſlow; it is evident, that, in the interior of the country in general, the period of doubling from procreation only muſt have been conſiderably leſs than 25 years.

The population of the United States of America, according to the late cenſus, is 5,172,312.[a] We have no reaſon to believe, that Great Britain is leſs populous at preſent, for the emigration of the ſmall parent ſtock which produced theſe numbers. On the contrary, a certain degree of emigration is known to be favourable to the population of the mother country. It has been particularly remarked, that the two Spaniſh provinces, from which the greateſt number of people emigrated to America, became in conſequence more populous.

Whatever was the original number of Britiſh emigrants which increaſed ſo faſt in North America; let us aſk, Why does not an equal number produce an equal increaſe in the ſame time in Great Britain? The obvious reaſon to

[a] One ſmall State is mentioned as being omitted in the cenſus; and I underſtand that the population is generally conſidered at above this number. It is ſaid to approach towards 6,000,000. But ſuch vague opinions cannot of courſe be much relied on.

be aſſigned is the want of food; and that this want is the moſt efficient cauſe of the three immediate checks to population, which have been obſerved to prevail in all ſocieties, is evident, from the rapidity with which even old ſtates recover the deſolations of war, peſtilence, famine, and the convulſions of nature. They are then for a ſhort time placed a little in the ſituation of new colonies, and the effect is always anſwerable to what might be expected. If the induſtry of the inhabitants be not deſtroyed, ſubſiſtence will ſoon increaſe beyond the wants of the reduced numbers; and the invariable conſequence will be, that population, which before perhaps was nearly ſtationary, will begin immediately to increaſe, and will continue its progreſs till the former population is recovered.

The fertile province of Flanders, which has been ſo often the ſeat of the moſt deſtructive wars, after a reſpite of a few years has always appeared as rich and as populous as ever. The undiminiſhed population of France, which has before been noticed, is an inſtance very ſtrongly in point. The tables of Suſſmilch afford continual proofs of a very rapid increaſe after great mortalities; and the table for Pruſſia and Lithuania,

thuania, which I have inſerted,[a] is particularly ſtriking in this reſpect. The effects of the dreadful plague in London, in 1666, were not perceptible 15 or 20 years afterwards. It may even be doubted whether Turkey and Egypt are upon an average much leſs populous for the plagues, which periodically lay them waſte. If the number of people which they contain be conſiderably leſs now than formerly, it is rather to be attributed to the tyranny and oppreſſion of the governments under which they groan, and the conſequent diſcouragements to agriculture, than to the loſſes which they ſuſtain by the plague. The traces of the moſt deſtructive famines in China, Indoſtan, Egypt, and other countries, are by all accounts very ſoon obliterated; and the moſt tremendous convulſions of nature, ſuch as volcanic eruptions and earthquakes, if they do not happen ſo frequently as to drive away the inhabitants, or deſtroy their ſpirit of induſtry, have been found to produce but a trifling effect on the average population of any ſtate.

It has appeared from the regiſters of different countries, which have already been produced, that the progreſs of their population is checked

[a] See p. 538 of this vol.

by the periodical, though irregular, returns of plagues and ſickly ſeaſons. Dr. Short, in his curious reſearches into bills of mortality, often uſes the expreſſion of "terrible correctives of the "redundance of mankind;"[a] and in a table of all the plagues, peſtilences, and famines, of which he could collect accounts, ſhows the conſtancy and univerſality of their operation.

The epidemical years in his table, or the years in which the plague or ſome great and waſting epidemic prevailed, for ſmaller ſickly ſeaſons ſeem not to be included, are 431,[b] of which 32 were before the Chriſtian æra.[c] If we divide therefore the years of the preſent æra by 399, it will appear, that the periodical returns of ſuch epidemics, to ſome country that we are acquainted with, have been on an average only at the interval of about $4\frac{1}{2}$ years.

Of the 254 great famines and dearths enumerated in the table, 15 were before the Chriſtian æra,[d] beginning with that which occurred in Paleſtine, in the time of Abraham. If ſubtracting theſe 15 we divide the years of the preſent æra by the remainder, it will appear, that

[a] New obſerv. on Bills of Mortality, p. 96.
[b] Hiſt of Air, Seaſons, &c. vol. ii, p. 366.
[c] Id. vol. ii, p. 202. [d] Id. vol. ii, p. 206.

the

the average interval between the viſits of this dreadful ſcourge has been only about 7½ years.

How far theſe "terrible correctives to the "redundance of mankind" have been occaſioned by the too rapid increaſe of population, is a point which it would be very difficult to determine with any degree of preciſion. The cauſes of moſt of our diſeaſes appear to us to be ſo myſterious, and probably are really ſo various, that it would be raſhneſs to lay too much ſtreſs on any ſingle one; but it will not perhaps be too much to ſay, that *among* theſe cauſes we ought certainly to rank crowded houſes, and inſufficient or unwholeſome food, which are the natural conſequences of an increaſe of population faſter than the accommodations of a country with reſpect to habitations and food will allow.

Almoſt all the hiſtories of epidemics, which we have, tend to confirm this ſuppoſition, by deſcribing them in general as making their principal ravages among the lower claſſes of people. In Dr. Short's tables this circumſtance is frequently mentioned;[a] and it further appears, that a very conſiderable proportion of the epidemic years either followed or were accompanied by ſeaſons

[a] Hiſt. of Air, Seaſons, &c. vol. ii, p. 206. et ſeq.

of dearth and bad food.[a] In other places he also mentions great plagues as diminiſhing particularly the numbers of the lower or ſervile ſort of people;[b] and in ſpeaking of different diſeaſes he obſerves, that thoſe which are occaſioned by bad and unwholeſome food generally laſt the longeſt.[c]

We know from conſtant experience, that fevers are generated in our jails, our manufactories, our crowded workhouſes, and in the narrow and cloſe ſtreets of our large towns; all which ſituations appear to be ſimilar in their effects to ſqualid poverty: and we cannot doubt, that cauſes of this kind, aggravated in degree, contributed to the production and prevalence of thoſe great and waſting plagues formerly ſo common in Europe, but which now, from the mitigation of theſe cauſes, are every where conſiderably abated, and in many places appear to be completely extirpated.

Of the other great ſcourge of mankind, famine, it may be obſerved, that it is not in the nature of things, that the increaſe of population ſhould abſolutely produce one. This increaſe, though rapid, is neceſſarily gradual; and as the

[a] Hiſt. of Air, Seaſons, &c. vol. ii, p. 206, et ſeq. and 336.
[b] New Obſerv. p. 125. [c] Id. p. 108.

human

human frame cannot be ſupported, even for a very ſhort time without food, it is evident, that no more human beings can grow up than there is proviſion to maintain. But though the principle of population cannot abſolutely produce a famine, it prepares the way for one in the moſt complete manner; and by obliging all the lower claſſes of people to ſubſiſt nearly on the ſmalleſt quantity of food that will ſupport life, turns even a ſlight deficiency from the failure of the ſeaſons into a ſevere dearth; and may be fairly ſaid therefore, to be one of the principal cauſes of famine. Among the ſigns of an approaching dearth, Dr. Short mentions one or more years of luxuriant crops together;[a] and this obſervation is probably juſt, as we know, that the general effect of years of cheapneſs and abundance is to diſpoſe a greater number of perſons to marry, and under ſuch circumſtances the return to a year merely of an average crop might produce a ſcarcity.

The ſmall-pox, which at preſent may be conſidered as the moſt prevalent and fatal epidemic in Europe, is of all others, perhaps, the moſt difficult to account for, though the periods

[a] Hiſt. of Air, Seaſons, &c. vol. ii, p. 367.

of its returns are in many places regular.[a] Dr. Short obſerves, that from the hiſtories of this diſorder it ſeems to have very little dependence upon the paſt or preſent conſtitution of the weather or ſeaſons, and that it appears epidemically at all times and in all ſtates of the air, though not ſo frequently in a hard froſt. We know of no inſtances, I believe, of its being clearly generated under any circumſtances of ſituation. I do not mean therefore to inſinuate that poverty and crowded houſes ever abſolutely produced it; but I may be allowed to remark, that in thoſe places where its returns are regular, and its ravages among children, particularly among thoſe of the lower claſs, are conſiderable, it neceſſarily follows, that theſe circumſtances, in a greater degree than uſual, muſt always precede and accompany its appearances; that is, from the time of its laſt viſit, the average number of children will be increaſing, the people will, in conſequence, be growing poorer, and the houſes will be more crowded till another viſit removes this ſuperabundant population.

In all theſe caſes, how little ſoever force we may be diſpoſed to attribute to the effects of the principle of population in the actual pro-

[a] Hiſt. of Air, Seaſons, &c. vol. ii, p. 411.

duction

duction of diſorders, we cannot avoid allowing their force as prediſpoſing cauſes to the reception of contagion, and as giving very great additional force to the extenſiveneſs and fatality of its ravages.

It is obſerved by Dr. Short, that a ſevere mortal epidemic is generally ſucceeded by an uncommon healthineſs, from the late diſtemper having carried off moſt of the declining worn-out conſtitutions.[a] It is probable, alſo, that another cauſe of it may be the greater plenty of room and food, and the conſequently meliorated condition of the lower claſſes of the people. Sometimes, according to Dr. Short, a very fruitful year is followed by a very mortal and ſickly one, and mortal ones often ſucceeded by very fruitful, as though Nature ſought either to prevent or quickly repair the loſs by death. In general the next year after ſickly and mortal ones is prolific in proportion to the breeders left.[b]

This laſt effect we have ſeen moſt ſtrikingly exemplified in the table for Pruſſia and Lithuania.[c] And from this and other tables of Suſſmilch it alſo appears, that when the increaſing produce of a country, and the increaſing de-

[a] Hiſt. of Air, Seaſons, &c. vol. ii, p. 344.

[b] New Obſerv. p. 191. [c] p. 538 of this vol.

mand

mand for labour, ſo far meliorate the condition of the labourer, as greatly to encourage marriage, the cuſtom of early marriages is generally continued, till the population has gone beyond the increaſed produce, and ſickly ſeaſons appear to be the natural and neceſſary conſequence. The continental regiſters exhibit many inſtances of rapid increaſe, interrupted in this manner by mortal diſeaſes, and the inference ſeems to be, that thoſe countries where ſubſiſtence is increaſing ſufficiently to encourage population, but not to anſwer all its demands, will be more ſubject to periodical epidemics, than thoſe where the increaſe of population is more nearly accommodated to the average produce.

The converſe of this will of courſe be true. In thoſe countries which are ſubject to periodical ſickneſſes, the increaſe of population, or the exceſs of births above the deaths will be greater in the intervals of theſe periods than is uſual in countries not ſo much ſubject to theſe diſeaſes. If Turkey and Egypt have been nearly ſtationary in their average population for the laſt century, in the intervals of their periodical plagues, the births muſt have exceded the deaths in a much greater proportion than in ſuch countries as France and England.

It

It is for theſe reaſons, that no eſtimates of future population or depopulation, formed from any exiſting rate of increaſe or decreaſe, can be depended upon. Sir William Petty calculated, that in the year 1800 the city of London would contain 5,359,000[a] inhabitants, inſtead of which it does not now contain a fifth part of that number. And Mr. Eton has lately propheſied the extinction of the population of the Turkiſh empire in another century;[b] an event which will as certainly fail of taking place. If America were to continue increaſing at the ſame rate as at preſent, for the next 150 years, her population would exceed the population of China; but, though prophecies are dangerous, I will venture to ſay, that ſuch an increaſe will not take place in that time, though it may perhaps in five or ſix hundred years.

Europe was without doubt formerly more ſubject to plagues and waſting epidemics than at preſent, and this will account, in great meaſure, for the greater proportion of births to deaths in former times, mentioned by many authors; as it has always been a common practice to eſtimate theſe proportions from too ſhort

[a] Political Arithmetic, p. 17.

[b] Survey of the Turkiſh Empire, c. vii, p. 281.

periods,

periods, and generally to reject the years of plague as accidental.

The higheſt average proportion of births to deaths in England may be conſidered as about 12 to 10, or 120 to 100. The proportion in France for ten years, ending in 1780, was about 115 to 100.[a] Though theſe proportions have undoubtedly varied at different periods during the laſt century, yet we have reaſon to think, that they have not varied in any very conſiderable degree; and it will appear therefore, that the population of France and England has accommodated itſelf more nearly to the average produce of each country than many other ſtates. The operation of the preventive check, wars, the ſilent though certain deſtruction of life in large towns and manufactories, and the cloſe habitations and inſufficient food of many of the poor, prevent population from outrunning the means of ſubſiſtence; and if I may uſe the expreſſion, which certainly at firſt appears ſtrange, ſuperſede the neceſſity of great and ravaging epidemics to deſtroy what is redundant. If a waſting plague were to ſweep off two millions in England, and ſix millions in France, it cannot be doubted, that,

[a] Necker de l'Adminiſtration des Finances, tom. i, c. ix, p. 255.

after the inhabitants had recovered from the dreadful ſhock, the proportion of births to deaths would riſe much above the uſual average in either country during the laſt century.[a]

In New Jerſey the proportion of births to deaths, on an average of 7 years, ending 1743, was 300 to 100. In France and England the higheſt average proportion cannot be reckoned at more than 120 to 100. Great and aſtoniſhing as this difference is, we ought not to be ſo wonder-ſtruck at it, as to attribute it to the miraculous interpoſition of Heaven. The cauſes of it are not remote, latent, and myſterious, but near us, round about us, and open to the inveſtigation of every inquiring mind. It accords with the moſt liberal ſpirit of philoſophy to believe, that no ſtone can fall or plant riſe without the immediate agency of divine power. But we know from experience, that theſe operations of what we call nature have been conducted almoſt invariably according to fixed laws. And ſince the world began, the cauſes of population and depopulation have been probably

[a] This remark has been, to a certain degree, verified of late in France, by the increaſe of births which has taken place ſince the revolution.

as conſtant as any of the laws of nature with which we are acquainted.

The paſſion between the ſexes has appeared in every age to be ſo nearly the ſame, that it may always be conſidered, in algebraic language, as a given quantity. The great law of neceſſity, which prevents population from increaſing in any country beyond the food which it can either produce or acquire, is a law ſo open to our view, ſo obvious and evident to our underſtandings, that we cannot for a moment doubt it. The different modes, which nature takes to repreſs a redundant population, do not appear indeed to us ſo certain and regular; but though we cannot always predict the mode, we may with certainty predict the fact. If the proportion of the births to the deaths for a few years indicates an increaſe of numbers much beyond the proportional increaſed or acquired food of the country, we may be perfectly certain, that, unleſs an emigration take place, the deaths will ſhortly exceed the births, and that the increaſe that had been obſerved for a few years cannot be the real average increaſe of the population of the country. If there were no other depopulating cauſes, and if the preventive check did not

not operate very ſtrongly, every country would without doubt be ſubject to periodical plagues and famines.

The only true criterion of a real and permanent increaſe in the population of any country is the increaſe of the means of ſubſiſtence. But even this criterion is ſubject to ſome ſlight variations, which however are completely open to our obſervation. In ſome countries population ſeems to have been forced; that is, the people have been habituated by degrees to live almoſt upon the ſmalleſt poſſible quantity of food. There muſt have been periods in ſuch countries, when population increaſed permanently without an increaſe in the means of ſubſiſtence. China, India, and the countries poſſeſſed by the Bedoween Arabs, as we have ſeen in the former part of this work, appear to anſwer to this deſcription. The average produce of theſe countries ſeems to be but barely ſufficient to ſupport the lives of the inhabitants, and of courſe any deficiency from the badneſs of the ſeaſons muſt be fatal. Nations in this ſtate muſt neceſſarily be ſubject to famines.

In America, where the reward of labour is at preſent ſo liberal, the lower claſſes might retrench very conſiderably in a year of ſcarcity, without

without materially diſtreſſing themſelves. A famine therefore, ſeems to be almoſt impoſſible. It may be expected, that in the progreſs of the population of America the labourers will in time be much leſs liberally rewarded. The numbers will in this caſe permanently increaſe, without a proportional increaſe in the means of ſubſiſtence.

In the different countries of Europe there muſt be ſome variations in the proportion of the number of inhabitants and the quantity of food conſumed, ariſing from the different habits of living, which prevail in each ſtate. The labourers of the ſouth of England are ſo accuſtomed to eat fine wheaten bread, that they will ſuffer themſelves to be half ſtarved, before they will ſubmit to live like the Scotch peaſants.

They might perhaps, in time, by the conſtant operation of the hard law of neceſſity, be reduced to live even like the lower claſſes of the Chineſe, and the country would then with the ſame quantity of food ſupport a greater population. But to effect this muſt always be a difficult, and every friend to humanity will hope, an abortive attempt.

I have mentioned ſome caſes, where population may permanently increaſe, without a proportional

portional increaſe in the means of ſubſiſtence. But it is evident, that the variation in different ſtates between the food and the numbers ſupported by it is reſtricted to a limit, beyond which it cannot paſs. In every country the population of which is not abſolutely decreaſing, the food muſt be neceſſarily ſufficient to ſupport and to continue the race of labourers.

Other circumſtances being the ſame it may be affirmed, that countries are populous according to the quantity of human food which they produce, or can acquire; and happy, according to the liberality with which this food is divided, or the quantity which a day's labour will purchaſe. Corn countries are more populous than paſture countries; and rice countries more populous than corn countries. But their happineſs does not depend either upon their being thinly or fully inhabited, upon their poverty or their riches, their youth or their age; but on the proportion which the population and the food bear to each other. This proportion is generally the moſt favourable in new colonies, where the knowledge and induſtry of an old ſtate operate on the fertile unappropriated land of a new one. In other caſes the youth or the age of a ſtate is not, in this reſpect, of great

importance. It is probable that the food of Great Britain is divided in more liberal ſhares to her inhabitants at the preſent period, than it was two thouſand, three thouſand, or four thouſand years ago. And it has appeared, that the poor and thinly-inhabited tracts of the Scotch Highlands are more diſtreſſed by a redundant population than the moſt populous parts of Europe.

If a country were never to be overrun by a people more advanced in arts, but left to its own natural progreſs in civilization; from the time that its produce might be conſidered as a unit, to the time that it might be conſidered as a million, during the lapſe of many thouſand years, there would not be a ſingle period when the maſs of the people could be ſaid to be free from diſtreſs, either directly or indirectly, for want of food. In every ſtate in Europe, ſince we have firſt had accounts of it, millions and millions of human exiſtencies have been repreſſed from this ſimple cauſe, though perhaps in ſome of theſe ſtates an abſolute famine may never have been known.

Muſt it not then be acknowledged by an attentive examiner of the hiſtories of mankind, that, in every age and in every ſtate in which man has exiſted or does now exiſt,

The

The increaſe of population is neceſſarily limited by the means of ſubſiſtence:

Population invariably increaſes when the means of ſubſiſtence increaſe, unleſs prevented by powerful and obvious checks:

Theſe checks, and the checks which keep the population down to the level of the means of ſubſiſtence, are moral reſtraint, vice, and miſery?

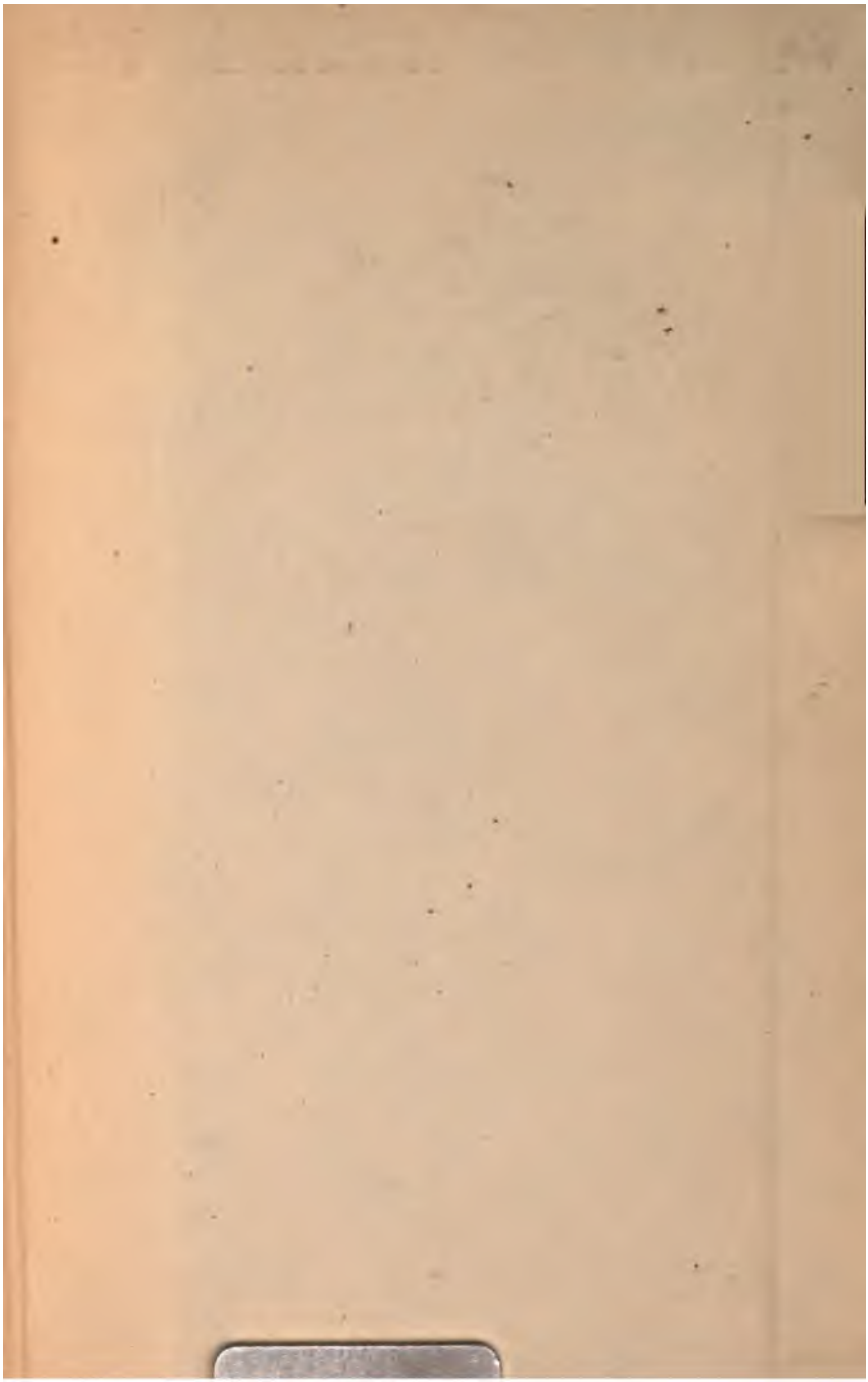
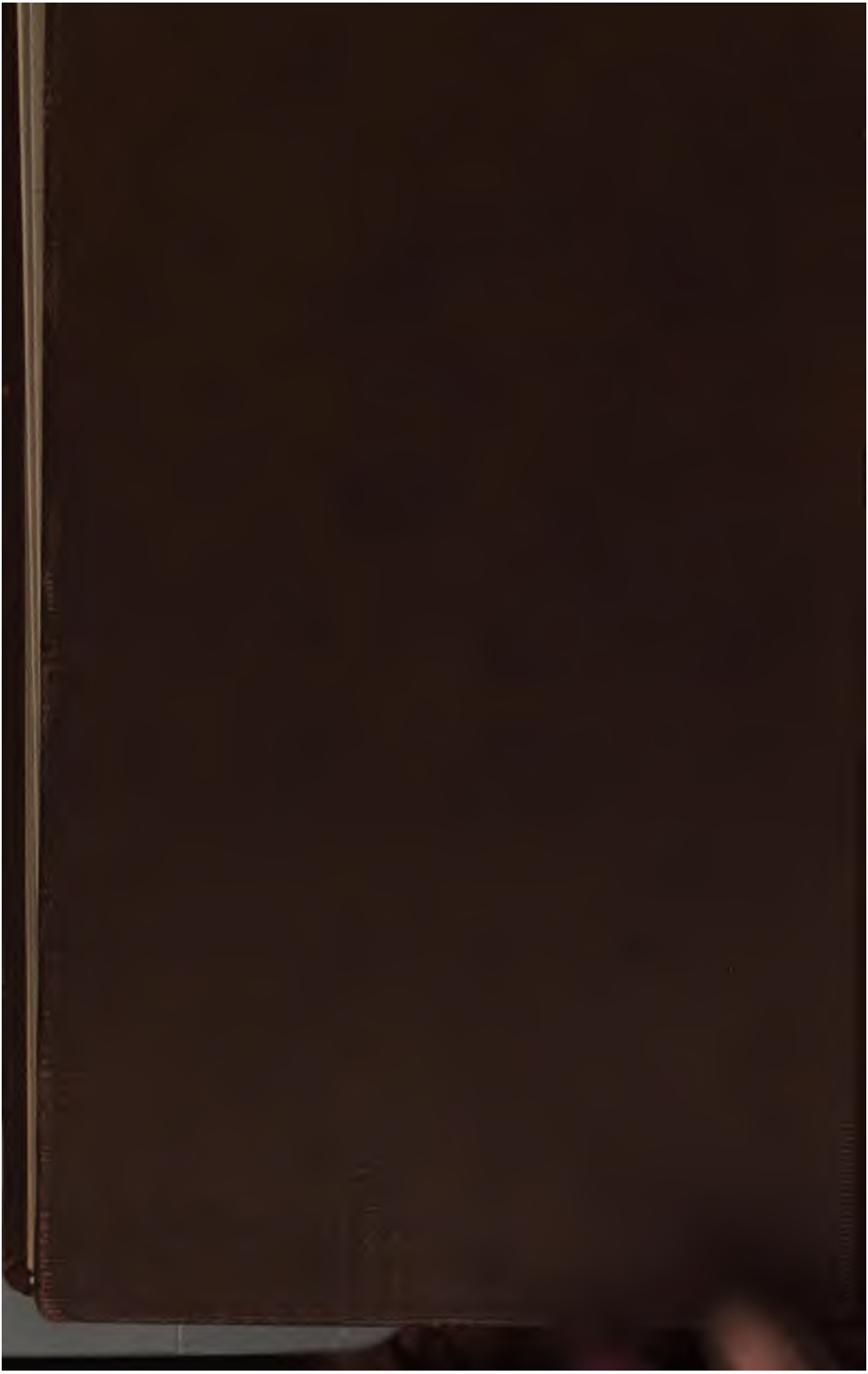
In comparing the ſtate of ſociety which has been conſidered in this ſecond book with that which formed the ſubject of the firſt, I think it appears, that in modern Europe the poſitive checks to population prevail leſs, and the preventive checks more than in paſt times, and in the more uncivilized parts of the world.

War, the predominant check to the population of ſavage nations, has certainly abated, even including the late unhappy revolutionary conteſts; and ſince the prevalence of a greater degree of perſonal cleanlineſs, of better modes of clearing and building towns, and of a more equable diſtribution of the products of the ſoil from improving knowledge in political economy, plagues, violent, diſeaſes, and famines, have been certainly mitigated, and have become leſs frequent.

With

With regard to the preventive check to population, though it muſt be acknowledged, that that branch of it which comes under the head of moral reſtraint[a] does not at preſent prevail much among the male part of ſociety; yet I am ſtrongly diſpoſed to believe, that it prevails more than in thoſe ſtates which were firſt conſidered; and it can ſcarcely be doubted, that in modern Europe a much larger proportion of women paſs a conſiderable part of their lives in the exerciſe of this virtue, than in paſt times and among uncivilized nations. But however this may be, if we conſider only the general term which implies principally an infrequency of the marriage union from the fear of a family, without reference to conſequences, it may be conſidered in this light as the moſt powerful of the checks, which in modern Europe keep down the population to the level of the means of ſubſiſtence.

[a] The reader will recollect the confined ſenſe in which I take this term.

END OF VOL. I.

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